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School Organization and the Individual Child

Grading and Special Schools

W. H. HOLMES

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SCHOOL ORGANIZATION AND THE INDIVIDUAL CHILD

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SCHOOL ORGANIZATION
AND THE
INDIVIDUAL CHILD

A book for school executives and teachers, being an exposition of plans that have been evolved to adapt school organization to the needs of individual children, normal, supernormal and subnormal.

By WILLIAM H. HOLMES, Ph. D.
Superintendent of Schools, Westerly, Rhode Island

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Gift of Chief of F. Lange to Education Dept

To

LOUISE MACDONALD HOLMES

and to those teachers, a small but growing company, who
have experienced the joy of teaching boys and girls
as individuals, this book is dedicated with the
hope that it may be a means of helping
to inspire other teachers to know
and follow the new and better
way of individualized
education.

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Part One
NORMAL CHILDREN

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FOREWORD

Within the past few years we have been coming to measure education by a new standard, the standard of individual achievement. This means that we have begun to differentiate the abilities of children, and to estimate the success of school work, not in terms of a general standard, but in terms of what each individual is able to do within the range of his own ability. This new standard has made necessary a modification of school organization, and there now appear schools for gifted children, for ordinary children, for slow and backward children, and for mentally defective children, and within these groups there are various forms of procedure for meeting more efficiently the needs of the members of each group.

The present volume undertakes the task of presenting in a somewhat detailed manner the various plans that have been evolved to make school organization fit the needs of the boys and girls both normal and abnormal that are enrolled as pupils in the public schools.

The part of the book dealing with plans of classification and adaptation brings together information from many different sources, information that every school executive must have to make his work intelligently efficient. In interpreting such a large mass of material, doubtless, mistakes have been made; the writer hopes that they are not such as to interfere with the general usefulness of the book.

The second part of the book, dealing with the treatment of abnormal children in the public schools, represents the first attempt to bring together information that the general school executive and special class teachers need in order to organize and carry on the work of so-called auxiliary classes

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or schools for mentally defective children. The aim has been to make the presentation plain and clear, rather than learned and technical, to the end that school men and women may be able to know the needs of these unfortunate members of the community. It has furthermore been the hope of the writer to bring home to the general reader some understanding of the great problem of the mentally unfit, some two hundred thousand of whom are members of our population, while only a few thousands, some fifteen thousand perhaps, have the custodial care that all should have if the greatest cause of crime, vice, poverty and degradation is to be made inoperative.

The writer wishes to acknowledge his indebtedness to many superintendents, normal school principals and special teachers who have kindly furnished much special information. He is also under deep obligation for encouragement and aid to Dr. G. Stanley Hall, Dr. W. H. Burnham and Dr. Theodate L. Smith of Clark University, whose combined work in the interest of the better education of children deserves the gratitude of the whole world.

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Chapter One

GRADING, CLASSIFICATION, AND SPECIAL SCHOOLS

Introduction

The aim of this study is to present the fundamental principles of the various plans of grading, classification and instruction that have been worked out in the United States and some of the European countries for the purpose of better adjusting the organization of the schools to the needs of the individual children.

Such a comparative study has never been made, and much valuable material on this vitally important topic of school administration is wholly unknown to many school officials and teachers and quite beyond the reach of many others.

While the study will give due emphasis to the organization of special, or auxiliary schools and classes, it will place even greater stress on adequate provision for meeting the needs of the vastly greater number of normal boys and girls. There seems to be a rather general agreement that the number of really defective children (not counting imbeciles and idiots) is not less than one per cent. of the total school population. For such children special instruction in separate schools under specially trained teachers is an absolute necessity. It has been further estimated that an additional seven per cent. (Goddard says fifteen per cent.) of school children are so backward as to require somewhat different instruction from that given the abler children. This latter estimate is, of course, rather arbitrary. It

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is, however, past dispute that there are many children who while they are not really defective yet lack the ability to make normal progress under the ordinary mass methods of instruction. For such children the ungraded class or supplementary individual instruction is a requisite to school progress.

A full treatment of the organization and equipment of special and ungraded schools and classes as developed both in this and foreign countries will be given in the second part of this study.

Turning now to the elementary or people's schools, we find that the idea that every human being should be educated simply because he is a human being, was first vitalized in the brain of Comenius. Luther and his followers advocated the education of man because of his immortal soul, and education was the spiritualizing process by which this soul was to be saved, but Comenius looked upon education as the process by which all mankind should be humanized.

"To Comenius," as Laurie states, "we owe the modern graded school, for his plan of gradation was so well devised that with slight modifications it is now the state system of Germany."

The system of class or simultaneous instruction is probably due to Canon LaSalle who in 1680 founded the society of Christian Brothers and imparted to them this method of teaching.

The simultaneous or class method of instruction was, however, adopted very slowly, and Landon tells us the individual method by which the master called the pupils to his desk one by one to recite their lessons and receive explanations lingered late "even in the heart of Prussia and was in vogue in 5844 primary schools of France as late as 1843." It held sway in some of the leading schools of Scotland until well into the last quarter of the nineteenth century.

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In our own country, Dr. Grimshaw writing in Barnard's Journal in 1855 deprecates "the time wasted by the old fashioned and false method of teaching individuals instead of classes." "I notice," he continues, "in my visits to the schools many pupils sitting idle; sometimes part of the school is asleep or what is worse, engaged in making a noise and disturbing the remainder who may desire to be industrious."

The individual method was driven out of England by the monitorial systems of Bell and Lancaster; while, doubtless, the classroom system of the larger cities of the United States was imported from Germany. Pestalozzi himself tells us he was driven by necessity to class instruction. "Being obliged to instruct the children myself, without any assistance, I learnt the art of teaching a great number together; and as I had no other means of bringing the instruction before them than that of pronouncing everything to them loudly and distinctly, I was naturally led to the idea of making them draw, write, and work all at the same time."

We see then that for centuries individual instruction was the chief instrument of learning and that class, or mass, instruction is a rather modern invention. It is evident that so long as individual teaching prevailed the evils attendant upon the rigid classification of the modern school could not occur. Every pupil was a law unto himself, and the spur that comes from mental contact was scarcely known.

During the middle part of the last century individual teaching fell into disgrace and with the rise of the factory city and the graded school the emphasis was placed on class teaching and class organization. Indeed, a careful perusal of the volumes of Barnard's Journal and of the early volumes of the proceedings of the American Institute of Instruction would almost lead one to believe that individual children scarcely

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existed in the schools of those days, so little is said of their needs.

Matters in America, however, began to change for the better in the seventies along with the introduction of the kindergarten idea and with Dr. William T. Harris's discussion of the principles of classification and grading in his reports as superintendent of the St. Louis schools.

The importance of the individual child has since then been brought to the front slowly but surely, until now the principle is rather firmly established that the school should be organized to meet the varying needs of the individuals who comprise it.

Under the plan of organization now general throughout this country the elementary school course of study is divided into eight yearly units of work called grades. By following such a course a normal child entering school at the age of six and making normal progress is able to complete the elementary school at the age of fourteen years.

It is, however, a fact well known and one that has recently been brought home to school administrators by several investigations, notably those of Ayers, Cornman, Bryan and Thorndike, that a large number of pupils do not proceed normally through the grades. Many of the pupils in some of the very best of our city school systems, are one, two, three, and even four years behind what is called the normal age of their grades.

Ayers' recent book, "Laggards in Our Schools," has, doubtless, done much to call attention to the vast amount of retardation and elimination of pupils in the public schools. Such a study, however, is only a beginning and, if really valuable results are to be obtained, more intensive studies of different cities must be made. Conditions in different cities are so various that one is led to doubt the value of inferences drawn

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from the comparison of amounts of school retardation in two cities so different in their social and industrial make-up as Medford, Massachusetts, and Camden, New Jersey. These two cities stand respectively at the head and the foot of the list of cities which Ayers has chosen for his study of school retardation. Medford is largely a suburban, residential city with a relatively small foreign population, comprising people such as would naturally appreciate the opportunities afforded their children by the public schools and would co-operate in bringing about their regular attendance.

Camden, on the other hand, has a relatively large foreign population, a condition affecting school retardation in a marked degree. The lower grades in such a city are often filled with over-age pupils who have recently come from countries where they have had no educational advantages. Furthermore, the attendance of pupils from the class of homes we should naturally expect to find in Camden is often irregular, thus causing the pupils to fall behind their classes, resulting finally in demotion and retardation. Again, the struggle for existence among families of this class is so severe that it is the tendency of the children to leave school at the earliest possible moment to help increase the family income. Elimination from the upper grades naturally results. Furthermore, the matter of child labor laws, school attendance laws, and provisions for their enforcement must be taken into account in any really scientific study.

The normal age limit for the different grades chosen by Ayers seems open to question. By his standards all children who are eight or more years old at the end of the first school year are counted as retarded. By such a standard many of the children in Kansas City, Missouri, for example, would be counted retarded. Under the school laws of Missouri no city can expend

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public money for the education of children under six years of age. Because of this law a great majority of the six year old children who take advantage of kindergarten instruction would enter the first grades some months after their seventh birthday and would inevitably be counted at the end of the year as retarded or over-age children. Ayers' contention would probably be that the general tendency in most sections of the country is for children to enter school at five or six years of age; still, if there is anything of value in the theory of physiological age and psychological age as distinguished from chronological age, as manifested in different children of the same racial stock and in the children of different racial stocks, it would seem that it might be pedagogically correct to find children with a difference of two or even three years in age engaged upon the same grade of work. Ayers' study loses much of its significance for a great many cities and towns if his normal age limit is raised one year for each grade, thus making it eight years for the first grade and fifteen years for the eighth grade. In view of the fact that the best teachings of physiological science would support the practice of not sending the child to school before the age of seven or eight years, it would seem that the age limits chosen by Ayers might be open to question. The greatest value of his study lies in the fact that it shows the vital need of more intensive studies in single communities or groups of communities presenting similar social and economic conditions.

Let us look now a little more specifically at the inner workings of the school. While a detailed discussion of the course of study would be out of place in the present exposition, still it may be remarked that the degree of difficulty in the course of study at various stages of the child's advancement is intimately connected with his progress and retention in the school.

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It would probably not be far from right to argue that the large amount of retardation in the lower and middle grades of the schools of Kansas City, Missouri, is closely correlated with the difficulty of the course in arithmetic. An examination of this course reveals difficulties altogether beyond the powers of many normal children in these grades. The children of the first grades are required to add and subtract and even to multiply and divide fractions. There are, of course, many children who can learn to do this even at the age of six or seven, yet a great number find it beyond their powers and must inevitably fall behind. That arithmetic is the stumbling block of many children all along the line is well known. In Providence, Rhode Island, number work is not studied except in an incidental way until the third grade, and yet even here, according to the statement of the late Superintendent W. H. Small, it is the cause of many failures. This leads one to question the wisdom of postponing all work in arithmetic until the third year of school life, lest the added amount of pressure necessary to learn the fundamental processes in the third and fourth years should cause many pupils to fail who might have gradually mastered many of the simpler number ideas in the first two school years. Smith has well said that it is a mistake to exclude rational work in number from the first school years unless it is certain that there is something better for the child to do.

It is probable then that work in arithmetic made too difficult at first or postponed too long, may in either case result in the retardation of pupils. Superintendent Ella Flagg Young points out that the desire of many first grade teachers to show wonderful results by having their pupils all read in second readers, may result in the neglect of pupils who might well do the normal work of the first grade. There can be no doubt

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that the bright pupil *fetish* has held sway in many of our schools to the disadvantage, as some think, of these superficially quick pupils and to the much greater disadvantage of the slower pupils, who in the B, C and D divisions have been neglected and allowed to come on as best they might. The former superintendent of public schools of Medford, Massachusetts, Mr. C. H. Morss, when asked the reasons why Medford made the best showing in Ayers' list of cities having different amounts of retardation in the schools, made the statement that one of the reasons was that no test in arithmetic was required during the first three years of school life.

Even a glance at the courses of study of many cities will reveal the fact that both in reading and arithmetic in the lower grades and in nearly all the studies of the upper grades too much is being demanded of children in the way of knowledge acquirements. Coupled with this is the fact that in many places children are held back in the upper grades for failures in such studies as oral reading and geography. The writer has in mind a rather able girl who was compelled to repeat a year's work in an eighth grade because of failure in these two subjects, although she had done passing work in all the other subjects of the grade. It was later discovered that the girl's difficulty in reading was due to eye defect and that her apparent listlessness in the geography work was due to defect in hearing. The absurdity of such a demotion is evident when we consider that in the upper grades neither reading nor geography is a sequential subject, that is a study like arithmetic in which certain principles mastered at one stage are necessary to progress in the next. The chances are that the girl in question would have done much better work in these two subjects and in all others under a new teacher and with work on new material. Such

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failures are not rare in school systems where progress is rated by certain arbitrary standards. That school officials who stand for such conditions lack pedagogcial insight goes without saying.

The fixed promotional examination set often by persons not in touch with the schools although it has long since been tabooed in school systems guided by common sense and intelligence, is still in force in a large number of cities and towns. Camden, New Jersey, which makes the worst showing in the matter of retardation in Ayers' list of cities has such examinations. This chance method of promoting children is bound to leave many worthy children branded with the mark of failure. There is little doubt in the minds of those who know the system of Regents' examinations of New York State, that these examinations are responsible for much of the retardation and elimination which Commissioner Draper has shown exists in the schools throughout that state. Mr. C. B. Gilbert when in charge of the schools of Rochester, New York, pointed out the evils of this system in a clear way, and Rochester was led to abolish the examinations in the elementary schools to the immense advantage of both pupils and teachers.

A rational course of study adapted to the real ability of the normal pupils in the different grades is one of the prerequisites to any plan of grading and classification or instruction that is to meet the needs of the individual pupils. The attempt to work out such a course was made in Chelsea, Massachusetts, under the late Superintendent B. C. Gregory. In that city the core of the course of study in all subjects consists of such principles and information as all normal pupils will be able to succeed in mastering. Facts and principles of value within the range of the normal pupil's comprehension are made fundamental in the course

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of study. The course is based on the theory that power gained through success in doing many less difficult but essential things is as valuable as the same power gained through failure to do difficult things. There is a truth of great educational value here that needs to be carefully worked out.

The courses of study in our high and elementary schools, following the lead set by higher institutions, are based on the philosophy of failure. The spectre of failure looms up at every stage of the course, and a great many pupils soon realize that failure for them is inevitable.

Such a philosophy may be and probably is the right one upon which to base the work of fairly mature students who are pursuing studies that are beyond those required for the common business of life. It is extremely doubtful if such a philosophy should form the basis of the work of children in the elementary schools. The great success in the ungraded rooms and in the special schools for backward children has been due to founding the work of such schools on the philosophy of success. In such schools each child is bound to succeed up to the full measure of his ability, and it is to this fact more than to any other that the remarkable progress of some of the pupils in these schools is due. There is no doubt that working on the same principle much can be done to arrange the course in the regular schools so that the attainment of success will be possible without constantly keeping in sight the black flag of failure.

A rational course of study, the subjects of which are so selected and so co-ordinated that every normal child is fairly sure of passing through the eight elementary grades without failing, is one of the prerequisites to the realization of school success among elementary school pupils.

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Chapter Two

PROMOTION INTERVALS

The frequency of regular promotions of pupils from class to class has been a topic of earnest discussion among school men in the United States during the past thirty or thirty-five years. The war has been against the yearly promotion interval which prevailed everywhere in this country before 1870 and which prevails to-day in a large number of cities and towns in the different states. The yearly interval prevails also in England and in Germany. It has, however, caused little discussion in those countries.

We shall discuss briefly the advantages and disadvantages of the yearly interval and then follow with a discussion of the half-yearly intervals and also of the still shorter intervals of promotion.

Yearly Promotions—Advantages

1. The chief advantage of the yearly interval comes from the ease with which it fits the school organization. The course of study is graded by years and it is natural that the pupils should begin the work of a grade in September and complete it the following June. The practice is probably inherited from the colleges which have always followed the yearly interval of classification.

2. The yearly interval allows the pupils to remain with the same teacher a full year, thus enabling the teacher to become acquainted with the pupils and to adjust the work to their individual needs.

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3. It enables the teacher in the higher grades to have one class in the room instead of the two or more which are necessary under the half-yearly or shorter interval, thus allowing for quiet study periods, during which time the teacher may work with individual pupils.

Yearly Plan—Disadvantages

The chief disadvantage connected with the yearly interval is its lack of flexibility. Under it, as ordinarily administered, no provision is made for the superior pupil to progress rapidly without skipping a whole year of work, a leap too great for any except the very few; nor is any provision made for the slow or retarded pupil, who, if he fails, must lose a whole year, repeating a considerable amount of work that he has already done.

These objections are valid so long as the yearly plan of promotions is unmodified and unsupplemented. It may be well to state here that many who hold to the yearly interval believe, and with some justification, that there is something more to the educative process than hurrying rapidly through a course of study. They hold that the rapid transit plans of grading tend in the main to superficial work and that the course of study should be both broad and deep as well as long.

In this stand they are supported by the great majority of school men in England and in Germany.

It is a fact of some significance that the three cities which show the least amount of retardation and elimination in Ayers' study have yearly promotions, while Camden has half-yearly promotions and stands at the foot of the list.

Furthermore the six cities which Ayers regards as the most efficient in the matter of retaining their pupils through the elementary school course all have the yearly interval.

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It would hardly seem safe to infer as does Ayers that "the first step toward mitigating the bad effects of failure in the schools is the system of half-yearly promotion."

The Half Year Interval

In 1891, at the request of the United States Commissioner of Education, Dr. E. E. White made an elaborate study of promotions and examinations in graded schools. Considerable space is devoted in this study to a comparison of the different class intervals. The conclusion is that the half year interval seems to possess the most advantages and the fewest disadvantages, especially for the elementary grades, with the exception of, perhaps, the first and second grades in which a shorter interval may be desirable.

The half year interval is sufficiently short to facilitate the promotion of individuals and sufficiently long to prevent a "too frequent readjustment of class work." It also presents the most favorable times for transfers and reclassification of pupils; the beginning and the middle of the school year.

As early as the middle of the year the upper classes of the elementary schools begin to be thinned out by the withdrawal of pupils for various reasons. The mid-year promotions help to keep the proper quota of pupils in these upper grades. It also makes room in the first primary grades for the entrance of beginners at the mid-year.

It facilitates also the promotion of many pupils who although able to skip a half year of work would not be able to skip that of a whole year. Again it obliges pupils who have been demoted to repeat only a half year of work.

The strongest objection to the half year interval is, according to Dr. White, the fact that it is not feasible

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in the high schools of small cities and towns where the number of pupils in the different years is not large enough to make division of classes economical. Another strong objection to the half-year plan is the fact that it makes necessary two divisions in nearly all school classes. There is recitation by one division and study by the other throughout the day. Again and again in his different addresses Dr. Harris insists that this plan cultivates in the child the power of sustained attention. The pupil learns to study under distracting conditions. This idea is strongly affirmed in a recent study of half-yearly promotion made by Mr. W. W. Chalmers which appears in the school report of Toledo, Ohio, for 1903.

In the same report, however, he quotes a prominent school official's opinion to the effect that under the half-year plan the pupils of the division not reciting learn a great deal from listening to the recitation of the pupils in the other division. This latter opinion would seem to be supported by the tradition that in the district school the younger pupils learned much from hearing the older pupils recite.

Recent studies in Germany bear out the assertion that the best thought work is not done under the distracting conditions of the classroom. Quiet study, a thing almost unknown under the two division plan, would seem so far as human experience goes to be a desirable thing to be cultivated in the schools.

Concerning the half-year interval Dexter makes the following statement: "Some schools, though altogether too few, are already trying the plan of semi-annual promotions with the greatest success, except for its strain upon the administrative machinery." Such a statement concerning the success of the half-year plan it is impossible to verify.

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The Term Interval

The term interval by which pupils are reclassified every third of a year or oftener, makes closer grading possible than either the year or half-year interval.

It is claimed that it almost entirely removes discouragement from pupils who fail, since they have only to repeat the work of a third of a year. It furnishes the most natural division of pupils into bright, mediocre, and dull.

In the matter of defects it calls for more school machinery in the way of program-making and of keeping pupils who are at their seats profitably employed. It tends to bring together an accumulation of dull pupils in the lowest third of the class where they are likely to stay, since the teacher is chiefly concerned with pupils who can move forward.

Usually it necessitates frequent changes of teachers; and finally, it makes promotion, rather than honest, thorough work, the aim of the school.

In concluding this brief discussion of promotion intervals it may be said that we have as yet in education very little, if any, evidence to show the real value of the short promotion intervals. Scientific studies are much needed here. Mere opinion has prevailed too long.

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Chapter Three

PLANS OF CLASSIFICATION

Several of the most important plans of grading and promotion in the United States are here presented. Since the short interval, or St. Louis plan, is really the parent of all plans of grading in this country it will be first considered. It will be followed by the Shearer, or Elizabeth plan, which is only a modification of the St. Louis plan. The concentric plan, the North Denver plan, and the group system will then be described, followed by the well-known Cambridge double-track plan and its modifications, the Odebolt and Le Mars, Iowa, plans. The Portland, Oregon, plan is briefly treated. Two German plans will then be explained: those of Charlottenburg and of Mannheim, the latter plan having been widely adopted in Germany.

After a brief introduction, presenting the views of superintendents and normal school principals as to whether the all-class method of instruction is satisfactory as a means of reaching the individual pupils, an exposition is given of the three best known plans of individual instruction, the Pueblo, Batavia, and Newton plans, the section closing with a suggestive plan combining the good points of several that have been presented.

It may be added that there are other plans of grading and of instruction that have attained considerable prominence, but they are so similar in their main features to the plans here presented that it has not been deemed worth while to present them.

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The St. Louis Plan

The first comprehensive discussion of the subject of a plan to introduce flexibility into the classification of the graded school system was made by the late Dr. William T. Harris in his reports as superintendent of the St. Louis public schools, during 1868-69 and 1871-72-73. In these discussions he explained the short interval system of promotion as carried out in St. Louis, by which plan pupils, in the lowest grades at least, were to be promoted every five or six weeks during the school year. These three reports aroused widespread discussion among school superintendents throughout the country, some opposing, some supporting. In the report for 1873-74, Dr. Harris entered into a still more detailed discussion of his plan, quoting at length the opinions of several prominent school officials who favored the plan, and also of those who were opposed to the short interval system.

As all the short interval plans are in a way modifications and adaptations of the St. Louis plan it will be well to discuss its chief features at some length.

1. Pupils differ greatly in their ability to do the work of the grades. A pupil entering the first grade at eight years of age can make nearly double the progress that can be made by a pupil of five years of age. The bright, nervous child will be able to advance more rapidly than the one who is dull and stolid.

2. Unless the school provides for these different rates of progress by frequent reclassification, the bright pupils not being held up to work of which they are capable will acquire habits of carelessness and listlessness, while the dull pupils being compelled to move forward at a too rapid pace, will become demoralized and disheartened.

3. Furthermore, the attendance of some pupils is far more regular than that of others, absence being

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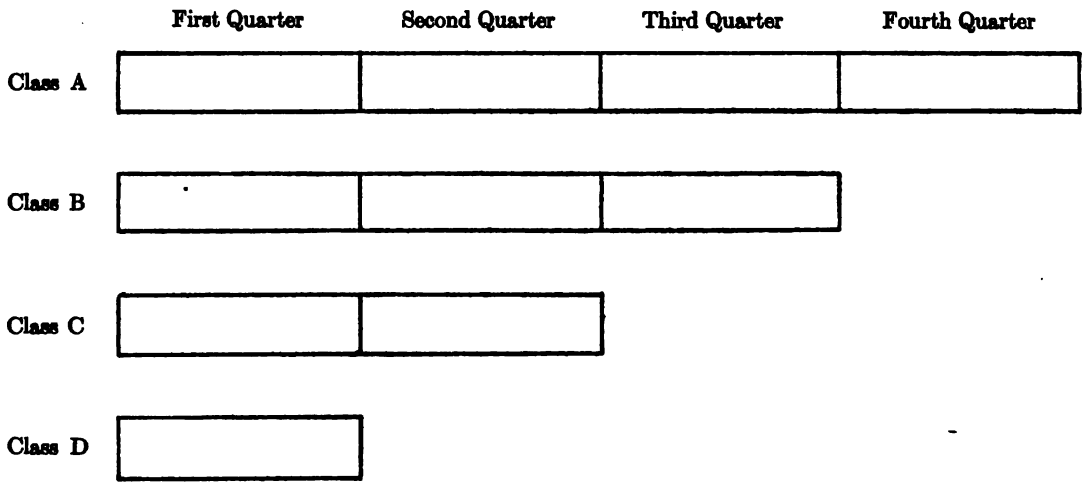
ST. LOUIS PLAN. FIRST YEAR OF WORK



The course of study for each year is divided into quarters. A new class is formed at the end of each 10 weeks or quarter. A, B, C, D, represent the four classes of a grade at the end of the school year in June. It is clear that class A has completed the work of a year and will go on to the next grade. Of course, all of these four classes might, if small, be taught by one teacher; the usual plan would be to give two classes to each teacher. Each year of work would be represented by a similar diagram.

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due to sickness, necessity of working for a living, and other causes.

4. Because certain pupils are able to move forward over the course of study at a more rapid rate than their mates and because large numbers of pupils in the upper grades are constantly leaving, some provision must be made to restore the proper quota of pupils to the teachers of the upper grades. This can be done, according to Dr. Harris's plan, by a reclassification and promotion of pupils in the different grades every ten weeks "or once in a quarter or term."

5. Frequent promotion is not to be made by classes, the few best ones in each section or class are to be united with the class or section above. Such a promotion through the different grades will result in bringing together in each section or class pupils of fair, average, and poor ability, together with a few of superior ability who at the time of promotion will stand at the foot of the class. "For a while," writes Dr. Harris, "the average and fair scholars in the class will have the stimulus of being the best in the class. The poor ones will rank as 'middling' and the new pupils will begin as the poorest and slowly work up toward the top of the class. The advantage to the self-respect of the slower pupils which comes from standing in relation to their classmates as abler and better informed is not to be lost sight of."

6. Under this plan, where in a large building there are several large sections of the first or second grade, the bright pupils would change teachers several times in one year, but in the upper grades with their small enrollment, the bright pupils would be advanced from division to division, according to Dr. Harris, and still remain one year or more under each teacher.

7. By this plan of promoting the few best, rather than of demoting the few poorest, it is claimed that the

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maximum of encouragement is attained since those remaining in the section after each special promotion do not feel that they have been "left back."

8. If promotions to the high school are made only once a year, the graded schools will be obliged to so arrange their upper classes as to conform to this order of things and the other grades from the first on must follow the same plan.

A class finishing the work of one grade before the end of the year would not be able to begin the work of the next grade until the beginning of the new school year. "The utter want of elasticity in the classification of the upper grades of the district schools," to quote Dr. Harris, "arising from the lack of frequent promotions to the high school, works violence continually to the interests of one-third of the pupils. All those delayed through sickness, the necessities of poverty, or inactive temperaments, either fall back a whole year, or else in a vain endeavor to make up their deficiency overwork themselves or get discouraged." In considering this plan one must bear in mind that it was devised by Dr. Harris as a means of filling up the upper grades of the St. Louis schools which were constantly being depleted by the withdrawal of pupils. It was primarily a plan for hurrying along the bright pupils. "The slow pupils," to use Dr. Harris' own words, "advance only when ready." It is easy to see that under such a plan the bright pupils would be the objective point of the teacher's exertions and the slow pupils would be allowed to drift along. There is reason to believe that even a slow pupil after being passed again and again by his more rapid-minded mates would at last wake up to the fact that he was "stranded" in the stream of progress.

It is maintained that the only disadvantages incident to the plan are connected with the frequent

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changing of teachers. This objection is dismissed by asking the question if it is desirable to keep a pupil back in his studies in order that he may recite for a long time with one teacher. This answer is hardly fair since there are ways of keeping pupils with a teacher, for a year at least, while still allowing them to make rapid progress.

Yearly promotions to the high school are said to be detrimental to the interests of at least one-third. Yet there are school systems that have yearly promotions and that make little of "sectioning" the lower grades, where for five years the percentage of pupils failing to earn promotion from grade to grade in the elementary schools, has averaged each year less than seven. The best evidence of the efficiency of the plan would be from the records of the public schools of St. Louis. It is, however, a significant fact that after all these years with the short interval of grading, both in St. Louis and Kansas City, there exists a large amount of retardation in their schools.

The Elizabeth Plan

The Shearer, or Elizabeth plan, of grading was developed and perhaps best carried out during Mr. Shearer's superintendency at New Castle, Pennsylvania. The name, Elizabeth plan, came about from the fact that after Mr. Shearer left New Castle to assume the superintendency of the schools of Elizabeth, New Jersey, he put the plan into operation in the schools of the latter city, but the plan was never carried out in the latter place in any thorough-going manner and is not in use there at the present time. Under the plan each of the eight grades is divided into three or four sections according to the abilities of the pupils. Each of these sections is allowed to do just as much work and go forward just as fast as it is able. There are no

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promotional examinations and as soon as a pupil shows ability to do the work of a higher section he is advanced to that section. Progress is gauged by the work in the sequential studies, reading and number in the lower grade, language and arithmetic in the higher grades.

The advantages of the plan are stated in Superintendent Shearer's own words.[1]

"1. It makes possible a frequent reclassification which is the only means of preventing the sacrifice of the pupils of the graded school. When a pupil gets ahead or behind his own class, he is at once moved a short distance forward or back, where he can work to advantage.

"2. An accurate grading of pupils, according to ability, into classes of from ten to fifteen, instead of herding them in classes of fifty, furnishes a practicable means of reaching each individual.

"3. Every pupil is touched with hope and with enthusiasm; for the progress of each one depends entirely on ability and application.

"4. Forty-two per cent. of the pupils in the highest grammar grade, having finished the work of that grade by January, at once started upon the work of the high school, and will be able to graduate in three years instead of four years.

"5. By the end of the first year's trial of the plan, forty-five per cent. of the pupils below the high school had gained from one-fourth to two-thirds of a year's work, without any urging on the part of the teachers."

The writer, after an experience of several years in schools graded under the plan, would make the following criticism of it:

1. It is not essentially different from the plan advocated and carried out by Dr. William T. Harris in the St. Louis schools from 1871 to 1873.

2. It is essentially a plan for enabling bright and often superficial pupils to move rapidly through the grades.

3. Because of this aim, the teacher puts her energies on the best pupils. The slow and dull pupils do not receive the attention that they need.

4. The number of divisions dissipate the energies of the teacher and poorer work is the result.

[1] Discussion N. E. A. Proceedings, 1895, pp. 408-9.

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5. Since there are so many divisions a large number of pupils are engaged for long periods in seat work, or "busy work," which is often rendered worse than valueless because the teacher has no time to supervise it properly. Two sections are all that any teacher should be obliged to look after.

This plan has been widely advertised as the result of an article, "The Lock-Step of the Public Schools,"[2] written by Mr. Shearer in 1897 for the Atlantic Monthly and widely commented on by the press of the country. It is also fully explained in a book, "The Grading of Schools," written by Mr. Shearer. The above-mentioned article and Mr. Shearer's book, together with many newspaper articles and addresses by him, have done a great amount of good in calling attention to the need of a better organization of the graded schools in order to adjust them to the needs of the individual child.

The Santa Barbara Concentric Plan

According to this plan children in each grade are divided into three groups so that each grade has A, B and C sections. "The sections do the work of the grade concentrically." The extent of the work so far as the fundamental principles are concerned is the same for each of the sections, but the B pupils do more extensive work than the C pupils and the A more than the B pupils. In arithmetic, for example, the C pupils would take only such work under a certain topic as would enable them to advance to a consideration of the succeeding topic; the B pupils would do more difficult work while the A pupils would approach the subject in a more thorough manner, learning, perhaps, short processes and methods of proof, things beyond the powers of a great many pupils.

[2] Atlantic Monthly, Vol. LXXIX, pp. 749-757.

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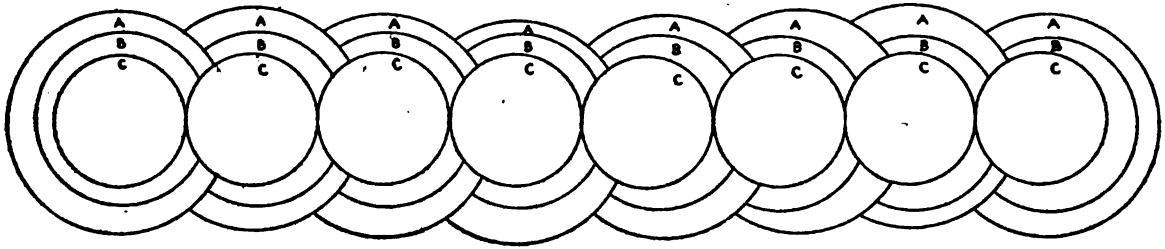
THE SANTA BARBARA PLAN



First Year Second Year Third Year Fourth Year Fifth Year Sixth Year Seventh Year Eighth Year

A, B, and C represent the working sections of each year or grade; a pupil doing the minimum amount of work would be classified in the C section throughout the eight years of the elementary course.

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When the A pupils of any grade are ready for the work of the next grade they are transferred to the C section of that grade, while there may be constant transfer from section to section within the grade.

This plan was carried out in the schools of Santa Barbara, California. Mrs. Burk[3] has made a very interesting study of the results of the plan, showing the number of sections covered by 835 children during a school year.

No. of Sections...	0	1	2	3	4	5	6	7	8
No. of Children...	28	58	195	369	74	75	30	1	5

From this record it can be seen that if we adopt three sections of work a year as the normal, that 34% of the children made slow progress, 44% normal progress, while 22% made rapid progress. In this study it is shown that 35% of the slow children were absent over 20 days as compared with 33% of the normal and 23% of the fast children. It is also shown that in the first three grades 47% of the children were slow, 36% normal, and 17% fast. In the fourth and fifth grades 16% were slow, 53% normal, and 31% fast, while in the sixth, seventh and eighth grades 30% were slow, 50% normal, and 20% fast. This study would seem to indicate the truth of what a great many school men believe, that the course of study for the first two or three grades and that of the higher grades is too difficult for a large number of children. The study also takes the scientific point of view, emphasizing the fact that "the normal child of one year is not the normal child of another year." Other studies along the same line would do much to counteract the evil which many studies in school retardation are now doing by over-emphasizing the over-age problem of

[3] Educational Review, Vol. 19, p. 299.

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the schools. The over-age problem in the school is not to be solved by lowering the compulsory attendance age from seven to six as Superintendent Maxwell of New York City seems to think. School attendance in the German cities where the compulsory age is six makes this evident. The problem of retardation and elimination is as great a problem with them as with us. The studies in retardation have doubtless done much to direct attention in the right way but they are lame and halt in many respects. They fail to take account of local conditions in their comparative estimates, judging by the same standard the city in which the children enter school at five years and another city in which the larger part of the children do not enter school until after they have reached the age of six.

Cambridge Plan

The plan of grading that has been most often described in books on school administration is the so-called Cambridge double-track plan. This plan was evolved and was in use in the schools of Cambridge, Massachusetts, for many years. It has now been replaced by a somewhat different plan.[4] It was applied only to the last six years of a nine-year course of study. Under this plan, running parallel with the regular six-year course, was a shorter course by which abler pupils might accomplish the regular work in four years. These four sections of the work were called the A, B, C, and D grades. A pupil entering and completing this course, saved two years in the nine-year course. There were, as can be readily seen from the accompanying diagram, two other ways of completing the course with a saving of one year in each case. A pupil could

[4] See Journal of Education, April 4, 1912, for description of new Cambridge Plan and also of the Malden, Massachusetts, Plan.

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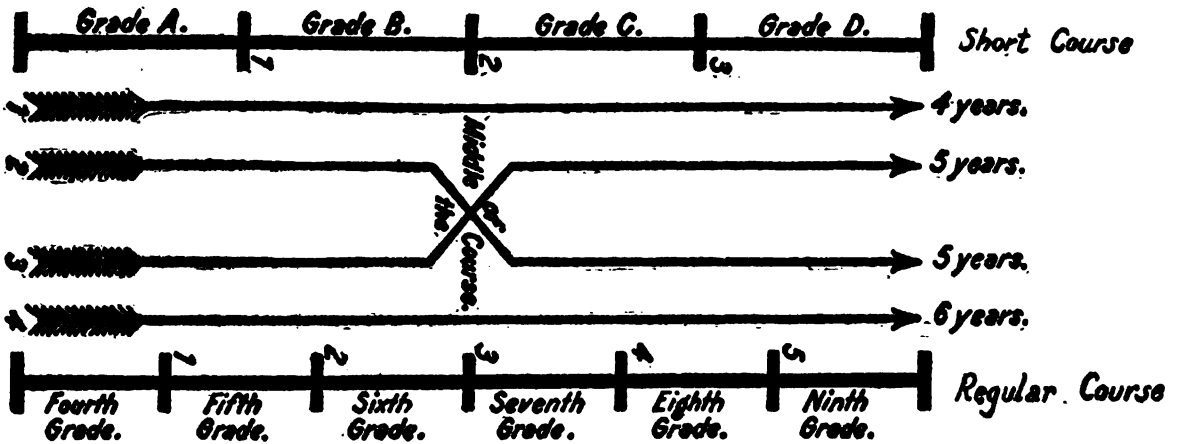
THE CAMBRIDGE PLAN



Arrow No. 1 indicates the four years' course; grades A, B, C, D. Arrow No. 2 indicates one of the five years' courses; grades A, B, 7, 8, 9. Arrow No. 3 indicates the other five years' course; grades 4, 5, 6, C, D. Arrow No. 4 indicates the six years' course; grades 4, 5, 6, 7, 8, 9.

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complete the A and B grades in two years and then at the close of the year be promoted to the regular seventh grade, thus completing the course in eight years; or he might save a year by progressing regularly through the fourth, fifth and sixth grades and then, by being transferred to C grade, complete the work in the two succeeding years. The plan was carried out in this way. All the pupils began the fourth grade on, as it were, the same line of attainment. As soon as possible the pupils were separated into a slow and fast division, the slow division constituting the regular fourth grade and the fast division the A grade. The pupils of the A grade did the work of the fourth grade and about one-half the work of the fifth grade. The next year the slower pupils constituted the regular fifth grade while the faster pupils were promoted to the lower division of the sixth grade and during the year accomplished the remaining half of the fifth grade work and also the work of the sixth grade, so that at the end of the year they were abreast of the regular sixth-grade pupils. In a similar manner the brighter pupils of grade six were promoted to grade C, and by doing a half-year of extra work each of the two succeeding years, finished the course in grade nine with the pupils who began the sixth grade three years previous.

Under the plan there must be two divisions or classes for at least the major part of the time in the fourth, sixth, seventh and ninth grades. The regular fifth and eighth grades will be composed of the slower pupils and will work as one class.

Objections to Cambridge Plan

The following objections to the plan are presented by a Cambridge teacher:

1. "In order to make fast or skipping classes large enough to make them worth while, it is necessary.

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to place in them children who cannot do the work as it should be done.

2. "The children in these skipping classes go over the work so rapidly that they do not get the thorough, systematic drill that they need.

3. "The selection of the best pupils from the regular classes leaves an accumulation of slowness and the teachers complain of the dullness of their classes.

4. "It allows for promotion only once a year." There seems, however, to be no good reason why in buildings employing sixteen or more teachers this plan could not be fitted to the half-year interval plan of promotions. This could be done by dividing the course of study into two parallel courses: a longer one of 18 sections and a shorter one of 12 sections. The transfer point would occur just twice as often as under the yearly plan.

Le Mars, Iowa, Plan

The Le Mars plan is the Cambridge plan applied to the nine grades instead of only the last six grades.

The courses of study are made out covering the same amount of ground but differing in the time required to do the work; one requiring six years, the other nine years. These courses run parallel with each other and are so arranged that they articulate with each other at different points along the line. Classes are so graded that they come together at different points, thus allowing for a transfer of pupils in either direction without a loss of any portion of the course of study. The short course of six years is divided into three two-year cycles and the long course of nine years into three three-year cycles. The end of each cycle is a transfer point. The grades of the short course are designated by the letters A to F; those of the long course, by the figures one to nine. The plan is worked out in this

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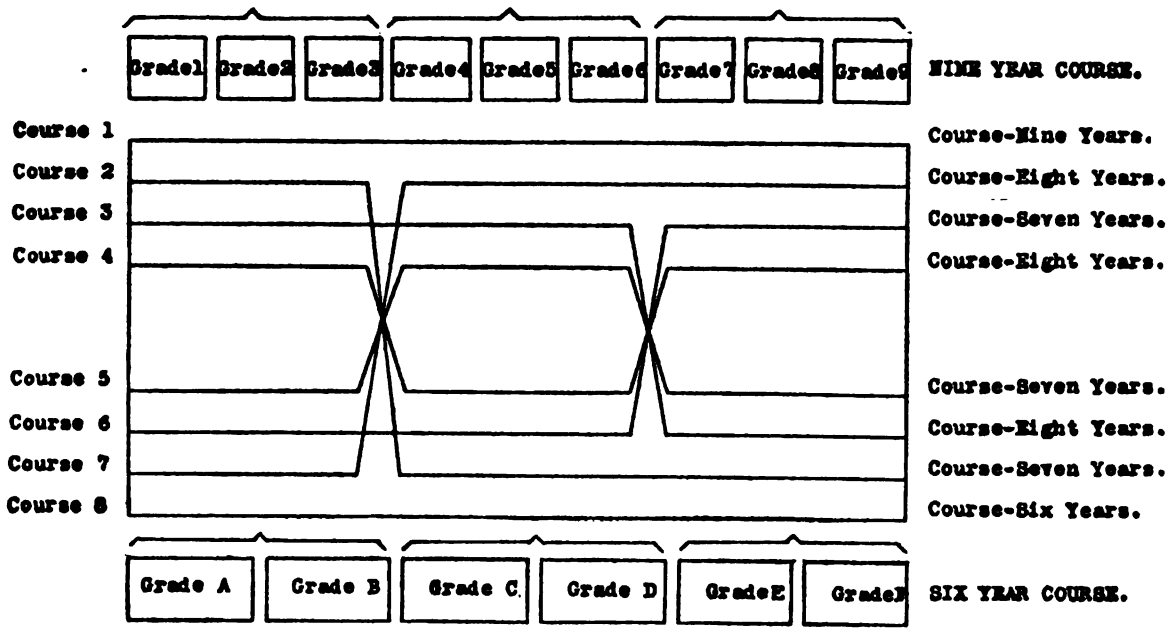
THE LE MARS PLAN



THE DOUBLE TRACK PLAN OF GRADING

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way: Grades 1 and A begin work together, but soon after beginning the work of the year the two grades or divisions begin to diverge in their work so that at the end of the year grade one has completed one-ninth of the work, and grade A one-sixth of the work. At the beginning of the second year the pupils of grade one are promoted to grade two, while the pupils of grade A are promoted to grade B and begin work in the room with the pupils constituting grade three. The early part of the work of grade B is more elementary than that of grade three, but grade B with its abler pupils finally overtakes grade three so that at the end of the year the pupils of the two grades have finished one-third of the course.

Results of the Plan

In June, 1908, 60% of all the pupils in the Le Mars schools were promoted to the nine-year course; 40% to the six-year course; 48% of the promotions were transfers.

In Odebolt, Iowa, where this plan is in use, at the end of the sixth year 54% of the pupils were in the nine-year course and 46% in the six-year course.

The record of promotions made in the Odebolt schools for the four years ending June, 1908, is as follows:

Regular promotions in the six-year course...	34.5%
Regular promotions in the nine-year course..	28.3%
Transfer promotions	35.5%
Non-promotions.....	1.7%

For this period 29% of the pupils worked altogether in the six-year course; 22% altogether in the nine-year course, while 49% worked in both courses. The lines in the diagram represent the different actual courses as the resultant of the two parallel courses

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articulating. Course 1 is the regular nine-year course. Course 2 takes a pupil through grades 1, 2, 3, C, D, E, F, completing the work in seven years. Course 3 carries pupils through grades 1, 2, 3, 4, 5, 6, E and F, completing the work in eight years. Course 4 carries one through grades 1, 2, 3, C, D, 7, 8 and 9 in eight years. Courses 5 and 6 are each seven years in length. Course 7, eight years, and Course 8 is the regular six-year course. Thus, besides the two regular courses there are three seven-year courses and three eight-year courses. Under the plan there are four kinds of promotions: the "regular" promotion by which a pupil is passed from one grade to the next higher in the same course, the "transfer" promotion by which a pupil is placed in the next higher grade of the opposite course occur at the end of the year. The "advanced transfer" promotion by which a pupil is transferred, as 4 to D, out of course to the next higher grade of the opposite course (such a transfer necessitates skipping certain portions of the work) and the "retarded transfer" promotion by which a pupil is placed in a lower course and given the benefit of a review before taking up advanced work (but without loss of time), may occur at any time during the year.

The intervals that separate the different classes may be seen from the following table:

Table of Intervals Between Classes

Between Grades.	Time.	Interval.
4 and C,	Beginning of year,	Zero
4 and C,	End of 3rd month,	4 weeks
4 and C,	Middle of year,	6 weeks
4 and C,	End of 6th month,	8 weeks
4 and C or 5 and C,	End of year,	12 weeks
5 and C or 6 and D,	Beginning of year,	12 weeks
6 and D,	End of 3rd month,	8 weeks

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Between Grades.	Time.	Interval.
6 and D,	Middle of year,	6 weeks
6 and D,	End of 6th month,	4 weeks
6 and D,	End of year,	Zero

The table shows that the interval between two classes throughout the course is never more than twelve weeks and for most of the time only four to eight weeks. Thus opportunity is afforded frequently to adapt the courses to the needs of both the slow and the quick child. The pupil of superior ability is not compelled to mark time. The pupils of slower development are not compelled to hurry over the work. The course is pliant at all points. The pupil is promoted on the estimate of the teacher and as soon as the work at any point in the course becomes too hard or too easy for a pupil, such pupil is reclassified.

Portland, Oregon, Plan

A unique system of classification and promotion has been in use in Portland, Oregon, since 1897. It superseded the orthodox eight-grade system with semi-annual promotions.

The course of study is divided into fifty-four parts covering in time eighteen terms of five months each. Promotions take place at the close of each term. A unit composed of three terms is called a cycle. While classes are permitted to go forward at the rate best suited to their powers, the two standard rates are three parts per term for the slower divisions and four parts per term for the faster divisions.

The normal class interval at the beginning of a cycle is three parts of the course of study measured not in time but in work. In large schools the class interval is often only two parts of the course. Sometimes in the lower classes only one part of the course separates the classes.

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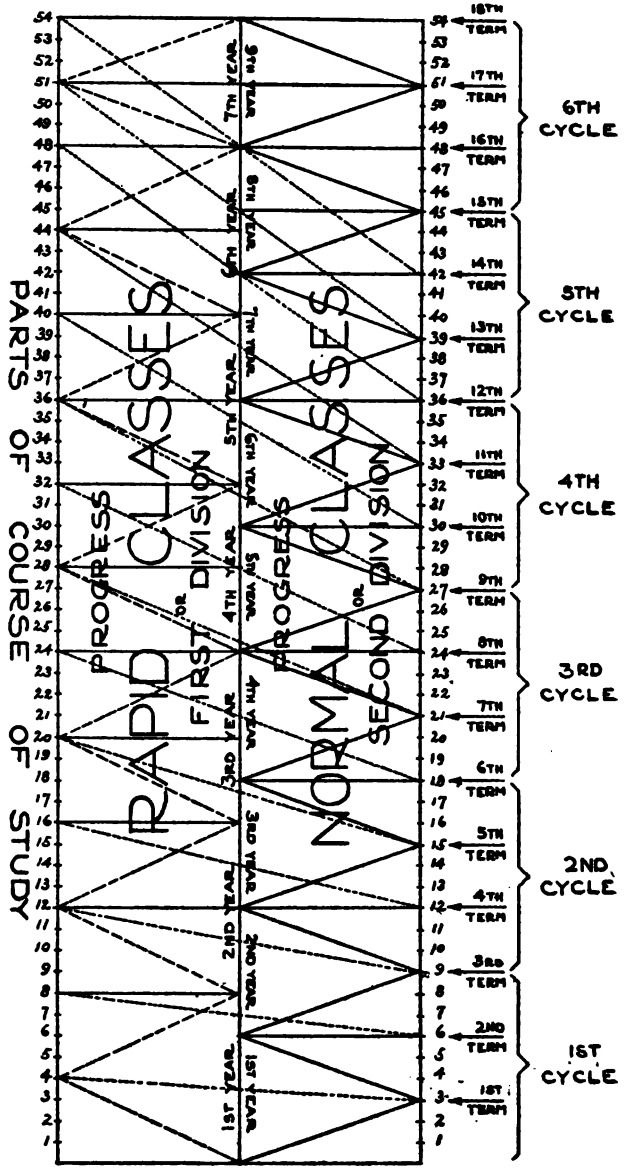
THE PORTLAND, OREGON, PLAN



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At the beginning of a cycle such pupils as have reached the same point of progress in the course of study are classified in two divisions; the first division is to advance at the rate of four parts per term while the second division is advancing three. It can be readily seen that by going forward at the same rate, at the end of three terms, the first division will have covered twelve parts of the course and the second division will have covered nine. At the end of each cycle each first division will have reached the same point in the course as the second division next above. Again a reclassification will take place and the first and second divisions will begin another cycle and so on in like manner until the fifty-four parts of the course are completed. The pupils who remain in the first division throughout the course will complete the work in seven years. Those who remain in the second division throughout will complete it in nine years.

North Denver Plan of Instruction

Superintendent James H. Van Sickle, now of Springfield, Massachusetts, devised a plan while superintendent of the North Side Schools of Denver, Colo., for producing "greater flexibility in class management, especially in the grammar grades." He contended that "the short and varying intervals in the primary grades together with the half-year interval in the upper grades were sufficient for the ordinary class organization of the school. The finer adjustments in individual cases should be made within the class. No mechanical plan of grading can adjust itself to the individual differences of the pupils." "The child," says Van Sickle, "who is strong in arithmetic may show less strength in language, while another, good in both, may need more time in geography or history, and so on in great variety, — while the average strength of the

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individuals composing the class may not vary greatly. No matter how carefully we grade, we find these differences."

The ordinary recitation is ill adjusted to the varying gifts of the pupils; if the bright pupils' ability is made the standard of class speed, the average and the slow are hurried on too fast; and bright pupils lose interest and develop wasteful habits, if the standard is adjusted to the abilities of the average and slow pupil.

"Is it not possible," says Dr. Van Sickle, "to retain the manifest advantages of the class recitation, so often set forth by Dr. Harris, and yet as the recitation progresses allow individual pupils to drop out and do other work more profitable than simply maintaining the semblance of attention?"

Aims of the Plan

1. To secure a more profitable use of the pupils' time.

2. To train each pupil to use his own judgment by co-operating with the teacher in deciding what he had better do at a given time.

3. To lead the pupil in this way to put forth more willing effort in the mastery of the less agreeable studies, such effort aiding to keep the pupil up to the level of the class.

4. To secure more study time in school and thus do away with the need of keeping after school ("staying after school," says Van Sickle, "is quite a different matter").

5. To enable the pupil to demonstrate his fitness for special promotion.

6. To bring about conditions that will awaken enthusiasm for improvement in efficiency and in knowledge, by emphasizing the fact that it is individual power, the excelling of one's self, that counts, rather

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than class marks, special seats, or the other school rewards given for excelling one's mates.

The main aim is thus to develop individual initiative and responsibility by leading the pupil to decide for himself when he is ready to do certain work or when he has finished such work, and to develop the will power necessary to do a piece of work alone. Under the usual plan of organization the teacher makes all the decisions; the pupils have no opportunity to develop independence of power that comes through making choices of real value. It is for this reason that the schoolroom is often inferior in its educational power to the athletic field; in the schoolroom the pupil is too often being developed; on the athletic field he is developing himself. It is the self-activity—the subjective power—that counts for most in education.

Procedure in Carrying Out the Plan

There is a certain minimum requirement in all studies to which all pupils are held.

While the pupils who need all the assigned time to complete a particular study are engaged upon such study, the more capable pupils "are, by process of natural selection, detaching themselves temporarily from the class in order to work on some study in which they are weak, or for broader or deeper study of some topic by means of reference books, gathering illustrative material, or following out some line of interest approved by the teacher." (In North Denver each room was provided with a carefully-selected reference library of from fifty to seventy-five volumes.)

Those pupils who have been excused from the recitation may at any time be called back to the recitation to help in the clearing up of some point for the other pupils, being in this way at all times held responsible for the work that is being done. In case

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such a pupil fails to respond at any time either in advance or review work, such failure is held as indicative of the fact that he has not attained such a degree of efficiency in the minimum requirement as to permit of a continuance of his release from the regular class work; this release is therefore canceled. Such experiences tend to stimulate the pupil to make his mastery of the subject more permanent, not for the day only. In this way the pupil's judgment is developed.

"A pupil may at any given time find the minimum in arithmetic or geography all that he can do while at the same time he is making a fuller study than some of the rest, of a period in history." For this privilege he is willing to work more energetically in the subjects in which he is less able. It is easy to see that here there is an opportunity for the school to foster in a systematic way the bent of individual pupils.

Individual pupils may be called upon from time to time to give the results of their extra reading or research to the class. In this way may be cultivated the desire for social service. The pupil gives the results of his work to the class. He is making himself socially useful. "His success awakens a desire in others to be able to make creditable contributions of the same kind; thus all are stimulated to do independent work in spare moments and to find spare moments for independent work. They learn how to find things in books. This is perhaps the most useful accomplishment that we can cultivate in a child. Books must always be his chief reliance after leaving school."

Characteristics of the Plan

It is not a rapid transit plan for hurrying pupils over the course of study.

The class is ready "with an even front" to attack each new lesson.

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The new lesson is first developed with the class as a whole.

One pupil does not travel faster than another, but he may get more. The road is wide as well as long. "It is not so much to the pupil's advantage to go through the grades rapidly as to get all that he is capable of getting while he is going through."

"The plan tends to even up the pupil in the various studies, since making pleasant excursions in favorite studies is conditioned upon fair attainment in all studies."

The additional study time makes less home work necessary.

The teacher has more time to devote to the less able pupils without injury to the others.

It tends to develop the latent powers of the pupils.

It gives the teacher an opportunity to judge of the fitness of individual pupils for promotion to the next higher class.

It thus gives opportunity for really able pupils to be promoted whenever they show the requisite ability.

In a class that is well graded every pupil will find some study from which he may be released now and then. The plan is thus a source of encouragement to all. It stimulates steady growth in the pupils. The motives held out of spending one's time profitably, of increasing one's store of knowledge, of being socially useful, and of gaining the power of self-mastery, are of the greatest value.

The plan demands of the teacher more thought and a somewhat broader preparation than the old plan. But there is compensation for the extra expenditure. The "active spirits" in the room are kept profitably employed with self-imposed tasks. The spirit of work thus gained solves nearly all problems of discipline. The plan requires that the pupils be given more free-

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dom than is customary but, as Van Sickle points out, the seeming perfect order of the old-time schoolroom with everybody sitting up straight, no whispering, no moving about, is not indicative of a good school if everything is done on the initiative of the teacher.

Below are some of the results as shown by the work for one year:

"In the eighth-grade class this year, 4 have finished, or will have finished, the eight-year course in less than six years, 7 in six and one-half years, 21 in seven years, and 24 in seven and one-half years. Able pupils are not kept marking time, but are advanced whenever they show the requisite strength. The half-year interval does not prevent this. The year interval would add materially to the difficulty.

"In the two buildings in which this plan of class management has been systematically tried there has been apparently greater attention to individual needs than in the other buildings. One hundred and sixty-one pupils finish the work of the eighth grade this year in three buildings. In one building, 57½% finish in eight years or less; in another, 62½%, and in the third, the one pursuing the ordinary plan, only 37½%."

This would seem to indicate that the plan tends to conserve the interests of individual pupils. There are many points of excellence in the plan that can be used under any system of classification.

The greatest difficulty that the writer has experienced in getting teachers to apply the main principles of the plan to their work lies in the fact that they have been trained in the normal school to think that all pupils must be engaged upon the same task at the same time. They cannot see that there can be class unity without class uniformity. The principles of the North Denver plan tend to do away with class uniformity and to promote class unity. Under it the ambitious

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pupil is given an opportunity to add to his spiritual wealth and while so doing to cultivate initiative and responsibility, powers that the modern school is charged with failing to develop.

The Group System, which will be described in the next chapter, is in reality only a modification and extension of the fundamental idea of the North Denver plan.

The Group System

The Group System of teaching has been given more or less attention by school men and has attained success in the schools of New York City. According to one writer the Group System has certain points of resemblance to the Elizabeth and to the Batavia plans. It is asserted that while in no sense is it the plan of the old ungraded school yet it does apply to the modern school all that is good in the ungraded plan. It provides a different rate of progress for children of different abilities. It succeeds according to certain of its advocates by placing emphasis on the old-fashioned drill by translating the humdrum of this drill into independent study. The aim is to cover the work assigned in such a manner that every child has a chance to do the work well. The essential aim is not the rapid advancement of the bright pupils, although by its use a bright child may advance as rapidly as he can cover the work with thoroughness. Its real merit lies in the fact that it enables the slow and backward pupil to keep up with his grade.

The plan may be carried out in two ways: on the basis of the Constant Group or on the basis of the Shifting Group.

Under the Constant Group the pupils of the class are formally divided into groups to be maintained for a definite period. The promotions from group to

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group occur only at stated times. The pupils are classified according to their ability to advance. There are usually two or three groups. This method of grouping requires divisions in nearly all the subjects of the course of study and the pupils in the most advanced group may pass to a higher grade, although they may be unprepared in certain subjects.

Under the Shifting Group, the children are divided according to their power really to grasp a new point. "Thus the teacher may have as many groups as she deems advisable in as many subjects as she chooses. The pupils may not be grouped in all subjects nor is the membership of the groups constant. Pupils may be promoted from group to group any time. There may be two groups in reading for example, and three in arithmetic or language. Occasionally, bright pupils may be promoted to a higher grade but this is not the main aim of the Shifting Group. The aim is to make the bright child do thorough, careful work and to bring the slow child up to the grade standard, while the aim of the Constant Group is to advance the bright child as rapidly as possible."

The advantages of the Constant Group may be summed up as follows:

1. It is economical. The bright pupil goes along from grade to grade as fast as he is able, thus making room in the lower grades for the admission of new pupils, thus lessening the demand for more rooms and more teachers.

2. The bright pupil, not being compelled to mark time will retain a greater interest in his work.

3. Standards of scholarship will thus be improved and the membership in the higher grades will be increased.

4. Because of the small groups the teacher will be able to reach individually those pupils who are weak

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in one subject and thus enable such pupils to advance with their grade.

Certain disadvantages are mentioned:

1. Rushing children through the grades tends to superficiality and lack of thoroughness and is likely to undermine the health of nervous ambitious pupils.

2. The formality of the Constant Group tends to cause the teacher to lose personal touch with the pupils.

3. Acquirement of a certain amount of knowedge is made the standard of advance and undue stress is likely to be placed on tests and examinations.

4. The dull and slow children are likely to be misunderstood and neglected.

The advantages claimed for the Shifting Group are as follows:

1. No child is slighted or neglected. The bright child does thorough work and is kept up to the mark by reviews and drills.

2. He learns how to study and has time to form habits of study.

3. Children in the slow group are given more time for instruction and thus brought up to grade, and pass with their brighter fellows to the next higher class, although they may not have covered as much ground in all subjects.

4. Every child receives personal attention and instruction from the teacher.

5. Since this does not require grouping in all subjects, certain branches may be taught to the class as a whole, thus retaining the advantages of having the class recite together. The studies for grouping are usually reading, arithmetic and grammar.

The method of carrying out the Group System is somewhat as follows:

1. The new lesson is presented to the class as a whole. A short test following the lessons reveals such

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pupils as have not mastered the new points and so need further instruction.

2. At the next recitation only those pupils are called to the class who failed to grasp the points at the previous lesson. The others, whom we may call Group A, remain at their seats to do extensive study. Those who have been called to the recitation, whom we may call Group B, again go over the lesson of the previous day, attacking it from a new point of view. A test at the end of this period will probably reveal a small number of pupils from this group who have as yet failed to grasp the essential points of the lesson.

3. This group, called Group C, will come to the recitation for a third period of study on the lesson, while Group B will be assigned study work similar to that assigned Group A, on the previous day, and the latter group will be given new work.

4. After the pupils in Group C have grasped the work, the class is reassembled and another section of new material is presented to the class as a whole.

According to one writer, the main objection to the plan is the difficulty in arranging for seat, or study work. Unless such work is carefully planned for and is carefully supervised it tends to foster habits of slovenliness and idleness. Rightly planned for and supervised it cultivates that most valuable of all habits, the power of independent work.

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Chapter Four

GERMAN PLANS OF CLASSIFICATION

The Charlottenburg Plan

Charlottenburg, the largest suburb of Berlin, has lately reorganized its school system to make it better meet the needs of the children. The school officials have come to the conclusion that a rigid course of study, which all the children are required to pursue, while it may meet the needs of the children in the smaller cities and towns, is not adapted to the needs of the children of a great city, whose mental and physical endowments are the result of such varied influences in both the home and in society at large. They have sought to meet these conditions by adjusting the school organization to the abilities of the children.

The six-year-old children, who are unable to meet the demands of the regular school classes, are placed in small preparatory classes of 24 pupils each and given instruction that partakes largely of the nature of the kindergarten.

Regular instruction for the abler children who begin school work is given in classes of not over 45 pupils each.

Those children who cover the course in this class are promoted to Class Six, the lowest regular class of the six-grade course; those pupils who fail are given the opportunity of entering a class only a half-year below in point of progress.

For the backward pupils the course is so arranged that on finishing the *Grund-klasse* they enter Class

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Six B. The course for the B classes is divided into half-year sections, thus making promotion or demotion easy. The membership of the B classes is limited to thirty. These B classes correspond to the furthering classes of the Mannheim system. They are separate from the special auxiliary schools which are for children with mental defects.

By means of the selective process in these B classes it is easy to determine the children who need the aid of the auxiliary schools. The Charlottenburg plan makes it possible to individualize instruction at every step of the course and to treat the child according to his ability and his present needs.

As can be readily seen, the Charlottenburg plan is not different in its essentials from many of the plans which have been worked out in our own schools.

The two important features of the plan are the special provisions for private help for such children as are failing in their studies, three hours a week being devoted to this work; and second, readjustment of the course of study by diminishing the amount of abstract memory work and placing greater stress on the concrete things in the child's environment, on drawing and allied work.

The Mannheim System

In Berlin, from 1896 to 1899, only about 61% of the children reached the highest classes of the *Volksschule*; in Charlottenburg, from 1890 to 1900, some 50% of the pupils left school, having covered only a part of the elementary school course. In other city systems of Germany the conditions were still worse. In Mannheim during the last two decades of the last century only about a fourth of all pupils were being carried through the highest grade.

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These failures were attributed to overcrowded classes, to over-difficult courses of study, to child labor, to absence, and to frequent changing from school to school. These reasons did not constitute the chief cause in the minds of many school officials; among them was Dr. Sickinger, superintendent of the schools of Mannheim. He attributed the failures to the fact that the school did not take account of the differences in the learning ability of the children. The children in the schools were being treated as if they all had the same powers of mind, hence, the failure of large numbers to profit by the instruction offered.

The Mannheim system of school organization was established in 1899 and is an attempt to remedy the difficulties pointed out above, by adapting the organization of the schools to the needs of individuals.

The Mannheim plan consists of a system of special classes running parallel to the regular classes of the *Volksschule*. In these special classes or "furthering classes" as they are called, are placed those pupils who, for one reason or another, show themselves too weak or too slow to do the work of the regular classes. Such pupils are grouped into classes that form seven grades running parallel to the seven regular grades. These classes are organized on the same plan as the regular classes and do much the same work, although less extensive. It has been found, however, that a special course of study should be arranged for these seven grades.

It would appear from the accounts of the Mannheim system that have been written in English that there is a constant interchange of pupils between the regular classes and the "furthering classes." This is not the actual condition of things in Mannheim.

During the year 1907-8, out of 2,354 pupils enrolled in the "furthering classes," only seven gained extra-

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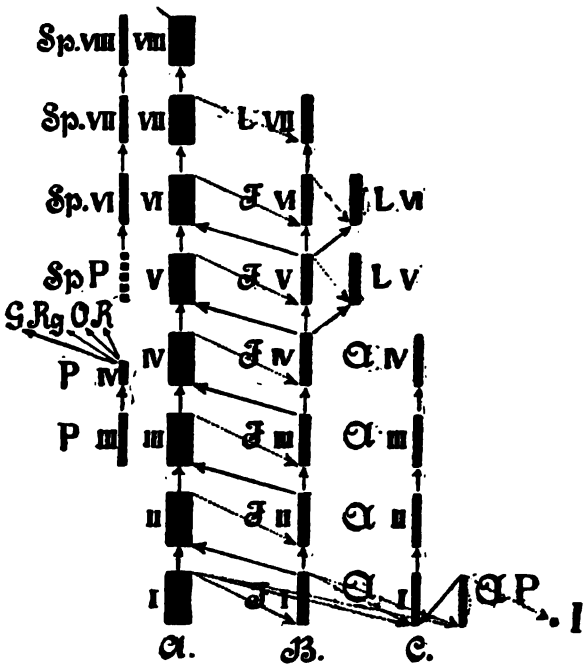
THE MANNHEIM PLAN OF GRADING



THE CLASS ORGANIZATION OF THE VOLKSSCHULE IN MANNHEIM

A. Regular classes, constituting eight grades.
Sp = Language classes for gifted pupils.
Sp P = Preparatory language classes.
P = Preparatory classes for pupils wishing to enter the Gymnasium, the Realgymnasium, the Oberrealschule and the Reformschule.

B. Furthering classes, constituting five, six or seven grades, the distinguishing feature of the Mannheim system.
L = Leaving or Finishing classes for pupils who will soon reach the limit of compulsory school attendance.
F = Furthering classes for slow pupils.

C. Auxiliary classes for mentally defective pupils.
A = Auxiliary classes.
A P = Preparatory class.
I = Institution for idiots and imbeciles.

————> Destination of regularly promoted pupils.
.....> Destination of demoted pupils.

The blocks representing the different grades also represent a school year in time.

I = Idiot Asylum.

G = Gymnasium
Rg = Realgymnasium
O = Oberrealschule
R = Reformschule
} Higher Schools.

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ordinary promotions within the school year to a higher grade of the regular classes, and only seven to a higher grade of the "furthering classes." At the end of the year only 123 pupils from these classes were promoted to higher grades of the regular classes. 1,741 were promoted to "furthering classes" of a higher grade, 103 to a "furthering class" of the same grade; 18 were sent to the auxiliary classes and 359 withdrawn from school.

It is clear that the "furthering classes" are almost exclusively for a special class of children who have little hope of gaining the regular classes, only 5.2% of the number enrolled being able to accomplish this end.

In commenting on these figures Dr. Sickinger writes in his yearly report for 1908 as follows: "These results are a confirmation of the view previously presented of the character and object of the 'furthering classes.' The deficiency which is peculiar to the pupils in the 'furthering classes,' shows itself chiefly, not as a gap which has arisen through conditions of neglect in the course of instruction but as lack of ability inherent in the nature of the children." "The capacity of the children for school work," according to Dr. Sickinger, "is in consequence of physiological, psychological, pathological and sociological conditions so variable that it is impossible, as promotion statistics show, to carry forward on a level through the same course of study and within the compulsory school age, from six to fourteen, all children obliged by law to attend the folk-schools."

On this conception the differentiation which characterizes the Mannheim organization is built up.

The pupils are separated, according to their individual endowments, into three groups. The mentally defective, who under ordinary conditions must be sent out from the lower grades as illiterates are assigned

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to the auxiliary schools which represent in their organization the first four grades of school work; next, the normally endowed children who are expected each year to be capable of gaining a promotion, are assigned to the regular classes of the regular eight-grade course; then those children, who while not abnormal, still are classed as below the average, are placed in the so-called "furthering classes." These classes are the main feature of the Mannheim system. Instead of being carried along with the regular classes, about 10% of the children enrolled in the folk-schools are segregated and taught in these "furthering classes," numbering not more than 38 pupils each. Not all German school men are in favor of the Mannheim system. The chief argument against it seems to be that so much extra machinery is not necessary to give the best results both to the bright pupils and also the backward.

Pretzel, writing in the *Die Deutsche Schule*, makes a strong point of the fact that the gifted pupils are needed in the classes to spur on the backward by their example.

A writer in the *Pädagogische Zeitung* of August, 1906, criticises both the Mannheim and the Charlottenburg plans. He says that the fault in the system of schools lies in a too difficult course of study which is causing an overtension of the powers of all the children, quick as well as slow. The remedy for this is not a division of pupils into classes according to their mental ability as has been done in Mannheim and Charlottenburg, but a simplification of the course of study so that all but the very few can accomplish it. For these few a second year in a grade will not be a detriment but a benefit. The "furthering schools" are to him unnecessary. "Where," he asks, "is the division of pupils into mental groups to stop? In Mannheim there are three divisions, but Charlottenburg has gone a step

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further and established a four-fold division, the very bright at the top, then the normal, then the backward and finally those who must be taught in the auxiliary school." The criticism closes with the admonition that among all these charitable arrangements in the school system the normal child must not be lost sight of.

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Chapter Five

THE CLASS VERSUS THE CLASS-INDIVIDUAL PLAN OF INSTRUCTION

Opinions of Superintendents and Principals

Within the past few months (1910) I have sent to many of the leading superintendents and normal school principals in every state to gain first-hand information as to what was being done in the way of training teachers to recognize and meet the needs of individual children; and second, to find out what was actually being done, and also what ought to be done in the schoolroom in this direction. The results of these returns are to be considered more at length in another section of my study.

One question asked of both normal school principals and superintendents was this: "Are you fully satisfied with the all-class method of school instruction and if not, how would you modify it to meet the needs of slow and backward or other needy individual pupils?"

Of the 54 superintendents and normal school principals who answered this question 45 expressed themselves as not satisfied with the all-class method. One expressed himself as fully satisfied with the method, while eight gave answers that could not be interpreted either for or against. It will be interesting to read several of the answers as they will form a sort of introduction to the discussion of several plans of individual instruction.

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1. "I do not approve the all-class method. A part of the time of the teacher should be given to individual instruction."

2. "I believe that in every school from half an hour to an hour per day should be devoted to work with individuals and that this hour should be during school hours."

3. "I am not satisfied with the all-class method and am not using it but a part of the time."

4. "I would suggest that the pupils be given more time for independent study, during which time the regular teacher should work with the slow and backward pupils, asking such questions and offering such suggestions as will stimulate them to their best effort."

5. "No, give individual attention to such pupils as need it, which includes most of every school."

6. "The class method of instruction has its obvious limitations. I should not want to abandon the class work, but supplement it with individual instruction."

7. "I know of no more well developed plan than the Batavia one. But suspect by a more thorough study by a larger number of experts still better results may be reached."

8. "I suppose the ideal way in which to attack this problem is to work for smaller classes. If this is not practical, then a special teacher to each group of six or eight classes may be the next best thing. Otherwise, in a closely crowded system of large schools each under a single teacher, I believe the best plan to be an unequal division of the class into two sections so that each of the slower pupils may receive a larger measure of the teacher's time than would otherwise be the case."

9. "I would not modify the class recitation. It is, properly conducted, the best educational instrument the teacher has. Individual pupils should have the teacher's attention outside of recitation."

10. "No, I like an adaptation of the Batavia system."

11. "A bit of personal experience may be in part an answer to the question and it may interest you. In 1896 the school committee of Waltham made arrangement with the Normal School at Framingham by which students who had finished their junior year might become assistants in different schools in the city whose need was greatest, to work with backward children. They were paid twenty-five dollars per month. Besides these workers we had an unassigned teacher of ability in the two large grammar schools whose work was with backward children and in doing substitute work in case of absence of any regular teacher. This plan was very successful in reducing the non-promoted children from a yearly average of about 20% to one of five to seven per cent. But in this work we never lost sight of what Dr. Harris and Dr. White call the 'community interest,' of the class as a whole. We need the 'community interest and not factional or group interests.'"

12. "The all-class method is not satisfactory or adequate. This is coming to be universally conceded. We are setting apart periods for individual work. I should judge there might be some merit in the New York City plan of grouping."

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13. "Every teacher should use every effort to help the unfortunate, even if it takes much extra time. I have not been able to devise a panacea for a recognized evil."

14. "If classes could be made small, not over thirty pupils to the teacher, and ungraded classes could be formed, whenever necessary, for deficient children, I should be fairly satisfied. I think that backward children should have a measure of individual help but any scheme which devotes a disproportionate amount of effort to the dull pupil in an effort to make him accomplish as much as the brighter member of the class is both futile and dangerous."

15. "I am fully satisfied with class methods. There is no 'the class method' for there are several. A class method that really develops, a method in which the teacher's aim in any given subject is to separate the subject into its elements, to arrange these elements in logical order, and then to bring the class face to face with these elements one after the other in this proper sequence and in proper time, is the quickest and surest means of reaching the so-called backward, or slow child."

It is thus evident that probably a large majority of school men are in favor of, and earnestly seeking for, some plan of meeting the needs of the individual children. The opinion last read expressing approval of the all-class plan was rather the prevalent one ten years ago. It is encouraging to know that the trend of opinion is in the opposite direction.

We shall next consider three plans of school instruction that have placed great emphasis on individual instruction: first, the Pueblo plan; second, the plan in use in Newton, Massachusetts; and last, the Batavia system of class-individual instruction. The Pueblo, or Search plan, makes instruction almost wholly individual and is in a way a return to the old ungraded school; the Newton plan has retained many of the good features of the Pueblo plan and eliminated many of the questionable ones; while the Batavia plan is more systematic than either of the other two in that it assigns a definite amount of time on the daily program which is to be devoted to individual instruction and presents a rather definite technique which such instruction is to follow.

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Plans of Instruction for Reaching the Individual Pupil

The Pueblo Plan

The Pueblo or Individual Plan of instruction was developed by Mr. Preston I. Search while superintendent of schools in Pueblo, Colorado.

The plan is essentially a return to the individual organization of the school which prevailed for centuries until La Salle late in the seventeenth century discovered the value of class instruction. Indeed, the individual method existed in Scotland as late as 1886 in some of the very best schools.

Under this plan each pupil is a class going ahead as fast as he is able or thinks he is able. The teacher hears every pupil recite that portion of the work that he has been able to prepare. The Pueblo plan was applied in both the high and elementary schools. The working day in the high school was divided into six periods each one hour long. One regular period each day was given to physical training in the gymnasium, while on alternate days another period was devoted to manual work. This arrangement allowed 4½ hours each day in which to do the work in the regular high school studies. To quote from Mr. Search, "Three periods a day are definitely assigned to the three literary studies carried on together; the additional 1½ hours is regarded as extra to be spent wherever the pupil needs it most, or in some cases according to his individual bent. In the lower classes the assignment of this extra time is left to the teacher; in the two higher classes it is left to the student. In the high school the work is conducted by departments and hence a field program is followed. In grades below the high school, the work is entirely by flexible programs, excepting as certain studies are arranged so as to systematize the time of certain teachers. The studies do not

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always come in the same order and hence all studies can share in the advantages of the stronger hours of the day. The time is not apportioned by rule, but is left entirely to the judgment of the teacher. The working periods are longer than is usual elsewhere. In the primary grades the methods are largely those of the kindergarten. Indeed, it may be added that the entire plan of the school finds its keynote in the application of the principles of the kindergarten to every department of school work."

The class recitation as ordinarily conducted was abolished because it reflected on the honesty of the pupils' preparation and because it wasted so much of the pupils' time. The school was transformed into a sort of laboratory; the office of the teacher was to pass from desk to desk, inspiring, directing and correcting each pupil at his work. The recitation and examination are wholly individual and each pupil, to use the words of Mr. Search, "actually and absolutely recites every chapter and line of his Latin, every section of his other studies, and passes his examination in the most thorough manner." The class exercise is used by the teacher at the beginning of a working period for presenting new principles and for giving general directions.

In the elementary schools the plan is somewhat different. The work of a given class is concerned with some subject, as percentage. Some of the pupils will do a minimum amount of work, while others will accomplish much that is supplemental. There are no fixed methods; each teacher is allowed to attack the work in her own way. The subjects of the course of study are so arranged that those of each succeeding grade are anticipated in such a manner in the preceding that to pass from the working section of one grade to that of the next higher is not difficult. The flexibility makes promotions from grade to grade an easy matter.

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"The plan," according to Superintendent Search, "is intended to care better for the so-called 'backward' pupils. The system of grading that compels the pupil who is behind his class to drop out of sight is not right. Somewhere along the line there must be a place for every pupil, be his advancement or progress what it may. Teachers are instructed to provide carefully for the discouraged pupil and to give more time to the lower half of the school, remembering that the bright ones may always be cared for by supplemental or advanced assignment of work." The advantages and results of the plan, as summarized by Supt. Search, are as follows:

"1. Better health.

"The pupils do their work in school; the other hours of the day are devoted to recreation and the relaxation that comes from change of work.

"2. It results in making trained, independent, self-reliant workers. The pupils have definite work to do, a definite time to do it, and they work under the direction of trained teachers and they are obliged to render an accurate account of the work done. Such work tends to beget self-reliance and independence. Each pupil stands or falls on his own merits. The work is all done at school, no parental help and no helping by fellow pupils.

"3. There is more work accomplished and it is more thoroughly done.

"4. There is more enthusiasm in the work. The dull and listless recitation with the time consumed listening to dull and poorly prepared pupils is done away with. Each pupil realizes that he has a chance to do his best and to advance according to his ability, hampered in no way. He develops a love of work and is filled with the enthusiasm that results from real accomplishment.

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"5. There is less discouragement. Every boy and every girl has a place in the school and a chance to do his or her best. There is no such thing as failure to be promoted. Each pupil is promoted each day.

"6. There is more opportunity for additional and outside work. There is time for pupils to read good books, attend lectures, and to do many other things outside of school that are as much a part of education as school work itself.

"Individual work of the kind mentioned calls for strong teachers, teachers who are more than lesson-hearers, who are masters of their subjects, and ready to point the way to the pupil at any stage of his progress."

We have discussed the individual plan somewhat in detail because school men in general have been somewhat disposed to ridicule it. The plan, however, as worked out by Supt. Search has so many points of excellence that it is worthy of serious study.

That in seeking to obviate the defect of the graded school, Supt. Search was led to slight certain well-established points of excellence in the class-method of instruction and organization, cannot be doubted.

Individual Work at Newton, Massachusetts

We find in the school system of Newton, Massachusetts, the nearest approach to a realization of the ideals for which Search rightly contends in his book, "The Ideal School." Of course, individual teaching is not carried to the extreme which makes it destructive of what there is good in class work, but the individual child is made the focusing point of the whole school system and toward the middle point the teaching power is directed. The work at Newton, under Dr. F. E. Spaulding, is based on the thesis that "such a modification of the rigid system of gradation and pro-

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motion is necessary as will make it possible—nay necessary—for each pupil to work as hard, as actively, and as independently, and to advance as rapidly as his sound and well-balanced development requires. It means, equally, a modification which will insure that no pupil be dragged suddenly and kept perpetually beyond his depth in the ocean of knowledge, but that each one, by his own actual efforts, build a stable foundation on which he can advance and rise securely, if ever so slowly."

The plan of reaching the individual is made effective by the employment of unassigned teachers.

The unassigned teacher has no regular class. Her work is supplementary to the class work of several teachers.

"The day's work of an unassigned teacher may be something like this. For the first half-hour in the morning there comes to her room a little group of a half-dozen children from a third grade. The third-grade teacher has selected these children because they are all having difficulty, beyond that experienced by their classmates, with some process in arithmetic, perhaps it is multiplication or division. The unassigned teacher has previously been informed as fully as possible concerning the condition and needs of these children. The half-hour is spent in discovering still more accurately the peculiar difficulties of each one, and in giving each just the assistance and practice which he requires. This work is individual so far as need be; at the same time the group can usually work together advantageously.

"At the end of the half-hour these children return to their class, and a group of children come from the seventh grade; perhaps there are only four in this group. They are not having unusual difficulty with any subject. Quite the contrary; they need more work and more difficult work than their class as a whole is capable of. Yet they are not fitted to pass at once successfully into the class next above theirs. The unassigned teacher prepares them for this long advance step. She takes them through the essentials which separate the work of their present class from that of the class which they are preparing to enter. To-day, and perhaps for several days, the work is in arithmetic. Other days it will be history, or geography, or grammar.

"When the period is over, these children give their place to a group from a fourth grade. The members of this group are neither having unusual difficulties nor are they capable of more than their classmates. They are temporarily behind the work of their class. There has been an epidemic of measles in their room and they have been kept out for several weeks on account of illness or exposure. The unassigned teacher's work with these will be similar in purpose to that with the last

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group; she will take them rapidly over the essentials covered by the class during their enforced absence.

"The unassigned teacher's fourth period is occupied with a full division, perhaps twenty pupils, of children of the fifth grade. They come from a large class composed of two grades, the fourth and the fifth. To relieve the regular teacher of some of her many recitations, the unassigned teacher takes the work in arithmetic with the fifth-grade division.

"The fifth period is devoted to a single child. He does not belong to any grade, judged by the evidences of ability which he shows when assigned any definite task. So he probably comes from a class in which he is not too conspicuous on account of his size. The unassigned teacher tries patiently to determine just what the serious obstacles in the child's advancement are. He may have to be sent to a special class for backward children. Possibly, with sufficient individual attention, he can work into some regular class."

Thus the work of the unassigned teacher goes on throughout the periods of the school day. Sometimes she works with pupils who are trying to gain a grade, more often with those who are behind in their work and need special aid to catch up with the class, or again, she works with individual children whose peculiarities of mental endowment place them out of adjustment with regular school work.

In Newton there are also unassigned teachers in the high school.

The great drawback to this kind of work is the difficulty in securing experienced teachers who are fitted for this special work. The ordinary teacher by training and experience is so thoroughly imbued with the idea of class teaching that it is hard for her to realize the significance of individual teaching.

The work in Newton is done by the most promising graduates of the normal schools, who, according to Supt. Spaulding, take up the work much more readily than do experienced teachers.

This would seem to suggest a fault in our present methods of training teachers, in that they are given no abiding conception of what individual teaching means. It also suggests a fault in our present system of school organization which is usually so ordered that

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the teacher comes into contact with the class mind to such an extent that she forgets the individual units and does not possess the ability to reach these lesser units.

At Newton the endeavor has been to eradicate from the minds of teachers and principals the idea that every pupil must begin the work of a grade in the fall and complete it the following spring, and that every pupil who fails must repeat the work of the grade where the failure occurred.

The fact has also been emphasized that real promotion is not a thing which takes place at stated periods but that it is continuous from day to day, if the work of the school is properly individualized.

Promotion is by subjects, rather than by grades. The range of variation among the different pupils of a class in the different subjects may be several months. In no case is it more than a year. Frequently the same teacher has charge of a class for two years, while often it is found advantageous to transfer individuals or groups from one teacher to another. The fundamental idea of the whole system is the best good of the individual, not his rapid passing through a number of grades. "Better grasp of subject-matter, better training in independent thinking may mean slower advancement for one pupil than for another."

Yet when the pupils and the parents understand that honest and independent work is what counts and that the school is so ordered that individual achievement is made possible at every point in the course, it is safe to say that as much progress will be made by all pupils as under the plan of rigid promotion and that the progress of the majority, so far as real education is concerned, will be vastly increased. Thus it is seen that at Newton there is no uniform plan of organizing a class for individual work. "Such a plan," according

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to Supt. Spaulding, "would defeat the very purpose of this work. In some subjects the pupils work in constantly changing groups, there being two, three, and sometimes even four groups within a class in some particular subject. Individuals are ministered to according to their needs but the individual works alone only until he can be classified with some group."

Class-work occasionally takes the nature of explanations and discussions on new topics, more frequently the nature of class drills on mechanical work; or again, topics which have been studied by the class-members individually may be taken up in review by the class. The problem work is largely individual, each pupil depending on his own efforts and solving as many as he can.

As a means of advancing from a lower to a higher group, a pupil may do the work of both groups in certain sequential subjects.

The actual working out of this plan is described by principal Charlton D. Miller of the Hyde School District in Newton:

"1. One class, a combination of first and second grade pupils, is composed of fifteen of the most promising pupils of a large first grade in September and the B, or lower section, of the second grade. In all probability, most of the first grade class will enter on third grade work during the early part of the next school year.

"2. In the fourth grade, a group of seven will probably reach the sixth grade in June or early autumn. The plan for accomplishing this is simple and the work not unreasonably hard for the teacher. Arithmetic requires no extra time on the part of the teacher, as the pupils work ahead individually during the regular period for that subject. Language admits practically of the same handling. In reading and geography there are separate divisions.

"3. A group of six pupils from the A section of the sixth grade, working under special provision, will, doubtless, complete the work of grades six and seven and take up eighth grade work soon after, if not at the opening of school in September.

"The entire class is considerably in advance of the grade work. Seventh grade geography will be completed by all members of the class.

"With the arithmetic taken care of by the individual classification, only history and grammar remain to be planned for specially, which is easily accomplished by the teacher without any outside work.

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"Grammar is given on alternate days; and the lessons being correspondingly longer, the ground can be covered. Advanced history is given while the rest of the class do language work.

"4. Seven pupils from the A section of the seventh grade are working for an early promotion to grade nine. There is every indication that this will be accomplished in time for the completion of ninth grade work by the end of the next school year.

"Here again the work will be conducted by the teacher in regular school hours, with the exception of geography which is being taught by the special assistant. These pupils have nearly completed seventh grade work in some subjects, and are working in separate divisions in history, geography, and grammar, preparing and reciting on alternate days. History and geography may not be entirely completed by June; and, in that case, study continues during the summer or early autumn, and examinations are taken.

"5. There have been the following cases of recent, individual promotions.

"A pupil has been promoted from the A section of the second grade to grade three, because of conspicuous ability as shown in class work, with evident capacity for advanced work.

"Two pupils have received a promotion from the fourth grade to the B section of the fifth grade because of the same conditions.

"Another typical promotion of this kind was that of a boy from the A section of the fifth grade to the A section of the sixth grade. In a case of this kind, there is some sixth grade geography to be made up. This is directed by the teacher who promotes the pupil."

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Chapter Six

THE BATAVIA PLAN

Class-Individual Instruction

Class-individual instruction, better known as the Batavia System, had its origin in the town of Batavia, N. Y. The history of this origin is very interesting. There was an over-crowded room of some sixty pupils in one of the Batavia schools. By a fortunate suggestion on the part of Superintendent John Kennedy it was decided to relieve the congestion by putting an additional teacher into the room instead of taking a class out. This teacher was Miss Lucie Hamilton and to her rare personality and superior teaching power is due largely the initial success of class-individual instruction.

Miss Hamilton was not an assistant to the room teacher. Her rank was co-ordinate but her work was entirely different. It was to be wholly with those pupils who for one reason or another were behind their class. She was to work with these pupils individually until they were able to work with the other members of the class. She was to work with the laggards until they were able to work with the leaders. From this individual teacher, class-individual instruction took its rise. For the first time in the history of education a teacher had been assigned to deal with backward pupils in a humane way. Up to this time they had been neglected or else classed by themselves in rooms for backward pupils and with the spur that comes from

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an aggregation of dullness they were supposed to succeed. Now they were to be kept with their fellows and given the opportunity to succeed. And they did succeed. After a few months of class-individual instruction, it was evident that a marked change had taken place in the first of two-teacher rooms. Pupils who had been considered very dull began to improve, and some of them were soon up among the leaders. There was only one way to explain the really marvelous change. The reason lay in the work of the teacher, who hour after hour, and day after day, had called the retarded and backward pupils to her side to find the difficulties, and to encourage them to overcome these difficulties.

There was a change not only in the working ability of the pupils, there was a change in their attitude as well. The whole atmosphere of the room was changed. All were happily at work. There were no bright pupils with nothing to do, and no dull pupils who could do nothing. The standard of work was gauged by what the ablest pupil could do, and all the pupils were soon well up to the standard.

So the good work went on in that room, and then the test came. Would the plan get similar results in other over-crowded rooms? Additional teachers were placed in other overcrowded rooms, and the results were as good as those of the original two-teacher room. It was thus shown that the success of the plan was not due to the personality or ability of a specially gifted teacher.

The success of the plan was so great that the superintendent and school officials began to think that the two-teacher room, with the combination of class and individual instruction, was the only solution of the problem of the dull and backward child. But after the two-teacher plan had been in successful operation

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for a year, it dawned upon Superintendent Kennedy that success was due not to the two teachers but to the two kinds of teaching. It was the happy blending of individual with class instruction that was obtaining the results. So after thinking the matter out very carefully, he announced to the teachers of the regular grade rooms that they also were to give individual instruction. He tells us that they looked astonished and asked how it was to be done. His answer was that half the school time was to be taken for individual instruction and half for class instruction. Some of the teachers doubted; some protested, saying they could not get the pupils along by giving all the time to class work and to expect the work to be done by devoting one-half the time to the dullards was simply preposterous.

"Well," said the superintendent, "the only way to tell is to try it. We have the old school plant intact. We have torn nothing down; and if the new plan proves a failure it will be an easy matter to go back to the old way. All I ask is that you give the new plan a thorough trial."

And they did—and no teacher went back to the old plan, and no teacher has ever wanted to go back. In this way the Batavia System had its birth. Its success in the single-teacher rooms was as marked as that in the two-teacher rooms. It met with like success in the rooms where one teacher taught two grades, and it has met with success in schools where the teacher has many grades.

Briefly, then, class-individual instruction is a systematic plan for helping slow and backward pupils to help themselves. We know that it has wonderful power to open the minds and hearts of children, both large and small, and cause them to unfold and grow. Col. Parker has said that the best result of the Quincy

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idea was a more humane treatment of little children. The best result of class-individual instruction is a more humane treatment of all children, large as well as small. We have been sacrificing millions of our children to the machinery of the graded school system. We have been trying to mechanize education. Class-individual instruction seeks to humanize this mechanism. It is only sympathy and common sense combined. For years we have been writing and talking about the individual child but we have been doing very little for him. Class-individual instruction does something for the individual child.

The idea of the system is really very beautiful. Here is an intelligent, sympathetic teacher, studying her flock to find the needy ones. She calls these needy ones to her side, one after another, and talks with them, and encourages them, points out their difficulties, and leads them to master these difficulties. She points the way,—she leads; they work and gain the power. The thing most needed in our schools is systematic, sympathetic individual help as an aid to class instruction. The plan we are considering gives this systematic, sympathetic, individual help.

What has the plan done for the children of Batavia?

It has given them the spirit of work and the power to work. The spirit of work is everywhere in all rooms. The pupils, all of them, attack difficulties with confidence and self-reliance.

You know there is a saying that "he who can is king." The children of Batavia *can*, they have power; they can do things; they are kings of their work. They attack difficulties without shrinking or cringing; and they master things usually. In case they are not able to master a difficulty, there is someone ready to point the way to mastery. The individual teacher is a leader rather than a helper. She has travelled the road and

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knows the way. She says to the pupil, "This way, follow me." The pupil follows but does the climbing himself; there is no boosting by the teacher.

The person who thinks that individual instruction means doing the work for the pupil misses the point entirely. The teacher works with the pupil, not for him. She gives him sympathy in his difficulties, but she never becomes so sentimental as to do his work for him. She encourages him by telling him that the difficulties he is meeting are such as all who have traveled the road of knowledge have met and mastered, and they are such as he may master if he will put forth the effort. The successful teacher under the class-individual instruction plan is a sympathetic, patient, courageous leader and as such she develops sympathy, patience and courage in her pupils.

The late Professor Hinsdale, in his excellent book, "The Art of Study," tells us that nowhere in this country is the art of study adequately taught. He then tells us that children must learn to study by studying under intelligent direction. The intelligent direction is the teacher's work. It means directing in the right way, time, and place. Teaching is causing the pupils to learn through intelligent direction. The pupil must do the work, do the studying himself. The pupils at Batavia know how to study and they study. They work and are happy. They have time for study and they use it for study. The great cry all along the line is, that children do not know how to study. How can they know if we do not give them the opportunity to learn? Direct them intelligently, give them something definite to study and then hold them responsible for the work assigned and you will find the children will develop the power to study.

The fault with most teachers is that they help either too little or too much. In one case the result

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is discouragement; in the other it is loss of power. To let a pupil wrestle with difficulties that he cannot master, is bad; to help him over difficulties that he can master with proper direction, is, perhaps, worse. Individual instruction aims to teach the pupil how to study by giving him something definite to study, with proper direction in case of need.

The children at Batavia have the power of independent work. There is no deception on the part of the pupil, no trying to tell something that the pupil does not know is right, in the hope that it might happen to be right. This habit of bluffing is perhaps the worst trait possessed by school children to-day. It is the attempt to get credit for something that is not the pupil's own possession. It is the direct result of the present system of class teaching, when the teacher is a tester and not a true teacher; where it is a disgrace to confess ignorance and to say, "I don't know." If a pupil in Batavia does not know a thing, he says so frankly, and is either told to look it up, or at the next individual period he is taught what he does not know. There is no premium placed on superficial word repetition. There is no attempt to deceive the teacher; such an attempt would fail because the teacher knows her pupils. Her work is teaching not testing. She tests, of course; but she tests that she may teach; she does not teach that she may test. There is a great difference between the two kinds of work. The pupils are working for knowledge and power, not a high per cent. on report cards. If the plan did nothing more than eliminate deception from class recitation it would be a great blessing.

Some of the chief merits of class-individual instruction are its provision daily for a definite amount of individual instruction and its insistence that this time be given to those pupils who are most in need.

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It also lays stress on the fact that instruction is to be given at the point of greatest need rather than on the daily lesson. This is one of the main principles of efficient individual teaching, yet it is the one that is the hardest to get teachers to apply. Real individual teaching goes back, back until it reaches solid ground and there it begins to build.

The plan also provides the supervised study-period. The plan has been criticised because it devotes too much time to the backward pupils. It does devote a large share of the time to the backward pupils because they are the most needy, but in case the bright pupil shows that he needs individual instruction he receives his share.

Opinions of Teachers on Individual Instruction

It is interesting to read what teachers who have used individual instruction systematically in the schoolroom for a period of several years say as to the relation between pupil and teacher brought about by its use. Here are some bits of testimony from teachers of Westerly, R. I., where individual instruction is a regular part of the daily work. A department teacher of the seventh and eighth grade writes:

"The strongest argument that I know of in favor of individual work is the opportunity it gives the teacher to win the confidence and understand the personality of the pupil. Especially is this true in departmental work, where, as in my case, there are upwards of one hundred thirty dispositions with which to deal."

Another seventh-grade teacher writes:

"There is closer sympathy between teacher and pupils. The pupil is reached in a way that no other method reaches him."

A fifth-grade teacher:

"Teacher and pupil understand each other better, are drawn closer by questioning, and oftentimes a study

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once looked upon as a bugbear becomes one of pleasure and much profit."

A departmental teacher in geography and science:

"I have observed a much more perfect understanding of pupil by teacher and vice-versa. Many cases of discipline have been most pleasantly adjusted through the use of this period. Many unpleasant happenings have been avoided by a timely talk, a suggestion given, or the case at hand clearly put before the pupil. When the way is clearly pointed out many follow carefully. In the case of new pupils, I have reached many through individual periods, have had them interested and reciting well in a short time, whereas I would not have established an acquaintance so soon had it not been for the individual periods. This is especially noticeable in the case of children who are timid, who come from other schools, or from environments quite different from that of an average pupil."

A fourth-grade teacher:

"There is no doubt about individual instruction bringing pupil and teacher into closer relations. It broadens the sympathies of the teacher for the pupil. By it, the real difficulties and problems of the child are discovered. I have found children failing from poor sight or hearing, some whose minds were distracted from their work by regularly frequenting the "cheap show," and some who were purely lazy and needed to feel the pressure of compulsory work. I do feel that the opportunity that individual instruction gives me to know my children is very valuable. The personal contact with the teacher should and does mean much to the pupil."

Teacher of a third and fourth grade:

"As a result of this work there is a pleasant atmosphere in the room. Pupils do not become discouraged. They know they will be cheerfully helped. The

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teacher is able to know the pupils better, and pointing out his weak points to him while he is near her at the desk is more graciously received than if done in the presence of the whole class. I have never had a pupil who did not accept the individual help in the right spirit."

Teacher of mixed room:

"I think as a result of the individual system, the teacher and pupils become better acquainted with each other. There is a closer sympathy and a better understanding. The teacher sees more clearly the obstacles the child has to encounter, and the child learns to think of his teacher as a friend who will help him."

First grade teacher:

"I think that the pupil and teacher are brought more closely in touch with each other by this system than by any other. I would not have missed the close relationship for a great deal."

These bits of testimony are chosen at random from a considerable number. They represent fairly well the testimony of almost all the teachers who have used individual instruction for any length of time.

In presenting these views no claim is made as to the superiority of the Batavia System over many other plans. It has, however, the one advantage of being systematic. Under it the work is done daily. It is based also on certain definite principles, which must to a large extent be common to all plans of individual work that are effective, and which if carried out intelligently cannot fail to win success.

A Little Girl's Improvement Under Individual Instruction

"Little Elizabeth B. attends a country school of three grades in the town of Westerly, R. I. She is a

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subnormal child and would not ordinarily be regarded as a case to be benefited by individual instruction. She entered school in the spring of 1902 and I well remember her teacher's saying to me that Elizabeth would never be able to do anything with the work of the first grade. At that time I examined Elizabeth's work very carefully and told her teacher that I thought we ought to try to persuade the mother of the child to send her to an institution for defective children. The little girl, however, kept on at school doing little or nothing with the work. The next September she returned and started in with the first grade again. She was utterly unable to keep along with the other children. The following November the Batavia System was introduced into all the schools in Westerly. Elizabeth's teacher began to give her individual attention each day. Improvement was slow but improvement there surely was. On each of my successive visits to the school I could see that she was gaining ground. Toward the end of the year she was able to take part in the reading class on almost equal terms with the other members. At the present time she is reading with the others and a person who did not know, would have hard work to pick her out from the others, her work is so good. In number and written language, while her work is not up to the standard, the improvement has really been remarkable, and I believe that in time she will be able to do all her work well.

The child herself is really a different being. Her face is certainly lighting up with intelligence. She is happy and enthusiastic in her work. She is very proud of the fact that she is able to do her work so well.

Now the point I wish to make is this: If this remarkable change can be wrought on a subnormal child, can we not with patient, intelligent, loving, individual work hope to save every normal child who

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for one reason or another has been retarded in his work? This it seems to me is not too much to expect. If we do not save all these normal children, we may be sure that something is wrong either with the system or the teacher."[1]

This girl is now, May 1912, in Grade Seven of an eight-grade system, the number of grades having been changed from nine to eight. She is doing good work and has never missed a promotion since individual instruction gave her a start.

Suggestions for a Plan of Classification and Instruction

A plan approaching the ideal would be a synthesis of the excellent features from many of the plans that have been presented. The work would be based on what might be called a course of study in the fundamentals: this work would be so graded as to be within the powers of all normal children, both quick and slow. To it would be added a course in optional topics to be studied by the abler pupils largely by themselves, in order to develop initiative and self-direction. A record of such work would be made in the pupil's personal record book which should accompany him through the grades.

Beginning, perhaps, at the sixth grade the work would be somewhat differentiated without in the least breaking up the class organization.

For two hours a week on alternate afternoons, as in Switzerland, certain of the pupils would take work in a foreign language while the rest of the pupils could take hand work. The aim would be to keep the classes small, not more than thirty pupils in each of the two lower grades and not more than thirty-five in the other grades. In order to get the number of

[1] Reprinted from Educational Work, Vol. I, 1905-06.

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pupils in the two lower grades, large classes of forty to sixty pupils would be divided, one-half coming in the morning, the other half in the afternoon.

This plan of half-day sessions for the two lower grades has been carried out with success for years in several places. The first grade and perhaps the second would be divided into two divisions of ten or fifteen pupils each. This would reduce the seat work and its supervision to a minimum. Often in the second grade and in all the grades above, the class would recite and study as a whole and during the study periods the teacher would help individual pupils, usually singly, sometimes in groups of two or three, but rarely more. The chief feature of the plan would be the supervisor of individual work. This teacher would be in charge of the work of four or six rooms. In her hands would be the school welfare of all the individual pupils in these four or six rooms, but she would care especially for the abler pupils and also for the slow and backward. She would spend an hour or more every day in each of the rooms under her charge, teaching needy pupils, whether quick or slow. When an abler pupil had been promoted out of course she would see that he was adjusted to the work of the new grade. She would also look after pupils coming from other schools to see that they did not lose time by their change. Accompanying the pupils as she would through a series of years, she would come to know each pupil's peculiarities and be able to protect him from the injury that so often comes from a change of teachers. This teacher would, furthermore, have special knowledge of mental defects and be able to advise with teachers and parents, in regard to children with such defects. She would combine with her other work that of the friendly visitor, and thus bring the school and the home into closer co-operation.

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Such a teacher could work under almost any plan of grading. The plan of having such a teacher has been anticipated in a way in many places, with this difference, the individual teacher has often been a woman of little experience both in teaching and in life. What is wanted is a woman of maturity—a real school mother, who has a cosy corner in her heart for every child, who is imbued with the missionary spirit, and is bound to have every boy and girl under her charge have a fair chance.

With our schools so organized as to grading, following in the main this fundamental course of study, with both the class teacher and the individual supervisor doing individual teaching, and what is still better, personal work, both inside and outside of school (and with the really defective pupils in auxiliary schools), there would be little need of such separation of pupils as that at Mannheim, and there would be the best chance for every pupil to become a self-respecting, successful American citizen, one who could look the world in the face and say, "I am the master of my soul."

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Chapter Seven

HOW TO GIVE EFFECTIVE CLASS-INDIVIDUAL INSTRUCTION

To carry out class-individual instruction successfully, two things are necessary:

A. The right spirit.

B. The right method.

A. The right spirit is the motive power that sends the teacher along the way of right method to victory over slow and retarded minds.

The right spirit comprehends many essentials, but the chief are three in number:

1. Cheerfulness.
2. Sympathy.
3. Patience.

Let us consider briefly each of these essentials.

1. Cheerfulness is social sunshine. It is infectious. A smile on the part of the teacher will breed a whole room full of smiles; and a cheerful, "Let's work this difficulty out together," from the teacher, will cause the sluggish mind and heart to respond as nothing else will.

A smile and a word of approval if the pupil succeeds, and a smile and a word of encouragement if he fails, these things are necessary. An atmosphere of cheerfulness must pervade the room and the main source of this atmosphere must be the teacher's heart.

2. Sympathy is feeling for others. It is seeing things with the eyes of others; feeling things with the

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hearts of others; it is the ability to know things from the point of view of others. It is putting one's self in the place of another. It sees difficulties as others see them. It is the power that enables the adult to be a child again and the teacher to be as many children as she has enrolled under her charge.

The sympathetic teacher says to the slow boy: "This difficulty has puzzled many before you. I think it puzzled me. But you have the power to overcome the difficulty. Come, let us work together." Sympathy is especially necessary in dealing with boys and girls in the last two years of the elementary school and in the first two years of the high school. At this stage of development these boys and girls, silent, unresponsive, and seemingly unappreciative, crave the loving, sympathetic help that a mature mind can give. The teacher who feels for these boys and girls and goes to them is doing good that can never be estimated.

3. "He that can have patience, can have what he will." This is especially true in giving individual instruction. For days, weeks, and months, the teacher may work with some backward child with no apparent improvement. But there has been improvement and the teacher who has the patience to keep on will surely win.

It is well to bear in mind the story of the old Jewish teacher. To a slow boy he had repeated one of the proverbs four hundred times; then finding that his pupil had not mastered the lesson, he repeated it four hundred times more. In giving individual instruction the teacher must have patience like in degree, if not in kind, to that of this old Jewish teacher.

The teacher must not only be patient in waiting for results, she must be patient in her daily work. There will often be the tendency to say to some pupil,

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"Oh, we've been over that again and again and now you don't know." Such a teacher should restrain herself by saying, "What others have done I can do, if trying will do it. I will go over the matter again and again and still again." To a teacher who really schools herself to this attitude of mind, failure is almost impossible.

Patience, sympathy, and cheerfulness, these are all essential to the *right* spirit in giving individual instruction. Let no teacher who wishes to succeed underrate the value of any of these essentials.

The Right Spirit is to be sought first. The teachers of the future will be those who believe that teaching is most of all a spiritual thing, a contact of mind with mind, of heart with heart.

B. The Right Spirit must take the Right Direction, or follow the Right Method with reference

1. To Individual Work,
2. To Class Work.

In the preceding paragraphs the aim has been to show that by creating the right atmosphere in the room and the right atitude in herself, the teacher must seek to win the pupil's heart, and through his heart lead him to exert his will; for, as Dr. Harris well observes, it is weakness of will rather than weakness of intellect that is the cause of the slow progress of the great majority of backward children. This leads us to the first step in the Right Method of Individual Instruction.

The Pupil is Called to the Desk

I. The teacher calls the pupil needing assistance to her side at the desk. Here the pupil is apart from the class but still in its presence. Here the teacher and child are comfortably seated side by side. Each is now ready for work.

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The Teacher Works to Remove the Most Elementary Difficulty

II. In a low voice and with perhaps a pleasant word of encouragement or suggestion the teacher directs the mind of the pupil to some difficulty that is retarding him. This difficulty may be the result of failure to grasp some point that should have been grasped years before. For an eighth grade pupil, it may be a point that should have been mastered in the third grade. On this point, however far away it may be from the regular class work, the teacher must focus the mind of the child and her powers of teaching. Until these fundamental points are mastered there can be no true progress. Under the all class method, the teacher rarely if ever finds out the difficulties that are retarding individual children. She knows that some of her children are slow and backward, but the reason for this slowness and backwardness she does not know, nor can she ever know by using the all class method of instruction.

The Pupil is Made Self-helpful

III. The teacher leads the pupil to master the difficulties himself:

1. By not telling him anything that by judicious questioning he can be led to discover for himself. If, however, the teacher finds the pupil has not the data in his mind from which to draw right conclusions, she tells him the necessary facts at once and does not waste precious time in trying to draw water from a dry well; telling at the right time is teaching.

2. By not doing the pupil's work for him. Too often teachers show their pupils how to do things and wonder why the results of the showing are so poor, forgetting that the fundamental principle of education

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is self activity, that the pupil is educated only through what he does for himself. It is an easy thing for a teacher to say, "Don't you see how simple this matter is?" at the same time solving a problem or explaining a paragraph to the pupil, but it is quite a different thing to find out just what the pupil knows and with this knowledge as a basis lead him to see his way, and to do the work himself. One method is real teaching, the other is its counterfeit.

It Teaches Pupils How to Study

IV. Individual instruction furnishes an opportunity to teach pupils how to study. Many pupils fall behind their classes because they do not know how to select the essential parts of a printed paragraph. They have never been taught to see the difference between the important and the unimportant. For this reason they cannot read intelligently; they cannot recite intelligently in geography and history; and they often have difficulty in arithmetic because they cannot get the thought of the problems out of the "verbal husk." Through proper individual instruction they can be trained or led to master the printed page.

Individual Instruction Should be Wholly Individual

V. Individual work should be done with one pupil at a time. Group teaching, however small the group may be, is class teaching and has the defects of class teaching; namely, (a) the inability of the teacher to know that she is reaching each child's peculiar difficulty, (b) the tendency to regard difficulties as common to several children when in reality different phases of the same difficulty may be retarding as many different members of the group; where this is the case, every minute spent with one pupil

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trying to lead him to solve his phase of the difficulty is just so much time lost for the other members of the group, (c) and the reluctance of all children and especially of sensitive children to admit that they cannot see what their companions have said they could see. Group instruction will never enable the teacher to get close to the heart of the child and lead him to reveal himself. The presence of an audience has made many an able man seem to know almost nothing. "Stage fright" may be retarding some of your strongest minds. Timidity has caused many a pupil to fail. The encouragement and aid that come through individual instruction will make many a timid pupil self-reliant.

How the Teacher May Find the Pupils Who Need Individual Aid

VI: During the class recitations the teacher should make note of the pupils who seem to fail because they do not understand certain points. At the next individual period these pupils should be called to the desk for consultation and help. By examination of the daily written work and of the tests that may be given from time to time, the teacher will be able to find the weak spots that must be strengthened through individual work. A word of caution is here necessary. The teacher is to be the judge of who needs aid. She is not to wait for the pupils to ask for aid. If she pursues the latter plan, she will aid those who should be made to do the work themselves and neglect those who really need the aid but who will never ask for it if left to take the initiative.

Time to be Given to Individual Instruction

VII. *a.* Rooms with an enrollment of less than forty-five or fifty pupils are taught by one teacher.

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Half the time may be given to individual work and the other half to class work. During the individual period the teacher will work with pupils in those subjects in which they are the weakest. Reading, arithmetic, English, geography and history will demand most of the time.

b. In rooms of two or more classes half the time may be given to individual instruction and half to class work, the pupils reciting one day and receiving individual instruction the next.

The Order of Individual Periods in the Daily Program

VIII. Individual and class periods should alternate, a recitation period in a subject following an individual period in that subject although this order is not essential. When the teacher is giving individual instruction the class should be preparing assigned work on an advance lesson. Teachers must take care to see that plenty of profitable work is assigned in advance. This does not mean, however, that after a pupil has properly prepared his day's task in one subject, he should not be allowed to take up some other subject, but in general the pupils will have all they can do to prepare for the regular lessons.

The teacher must not make the error of thinking that the pupil she is holding out of class for individual work is losing ground. He is, in reality, gaining ground; for unless the difficulties that retard him are removed, he will never be able to take part in the class work on an equal footing with his mates. It is not the number of pages covered that indicates progress in class work, but the power on the part of all the pupils in the class to master the new problems that are presented each day.

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Record of Work

IX. The name of each pupil who receives aid should be recorded in a record book. Such a record will keep the teacher on the right track and will enable her to recall the steps by which she led a retarded mind from darkness into light.

The Relation of Individual Work to Class Work

I. Individual instruction makes for good class teaching.

The late Dr. Hinsdale tells us in his "Art of Study" that "teaching is causing another to know." It is neither lesson hearing nor lesson presenting and the teacher is something more than a lesson hearer, or a lesson presenter. The teacher is the one who causes the pupil to know. The red schoolhouse days were days of the school-keeper or lesson hearer.

The duty of the school-keeper was to hear the pupil recite assigned tasks; if the pupil knew his lessons, the knowing was the result of his own efforts; he was his own teacher; if he did not know, as was often the case, the lesson hearer passed him by with a reprimand or a blow. It was not the lesson hearer's duty to teach; he was to hear what the pupil knew.

The lesson hearer, or school-keeper, has passed from the better class of schools and in his place we find the lesson presenter, a higher and better type and one whose work is founded, to a certain extent, on scientific principles. The lesson presenter cuts up knowledge into units and presents these units to the class. The class in turn is supposed to re-present these units in the recitation-lesson, or in the test, or examination. This presentation work is usually done with the class as a whole. After the teacher has presented the work he assumes that the different members of the class

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know the work or will know it after they have studied it. If failure results, this failure is assumed to be the fault of the individual pupil, and such failure is considered, in general, a disgrace and is usually punished by detention after school. The aim of these after school periods is, in general, to teach the pupil that he must not fail. He must get his lessons somehow, by hook or by crook. So long as he can recite the teacher is satisfied; rarely does a teacher take pains to find out how the pupil prepares his lessons. Such an inquiry would often reveal the fact that many pupils are doing little or no independent work. The pupil's aim is to recite the day's lesson and get a good mark. Someone else may have done the work of preparation for him. It makes little difference to the teacher; her business is to present the lessons not to find out what effect the presentation has had on the individuals.

This practice of ending the teaching process with the presentation of the lesson has resulted in a vast number of failures among pupils and in a vast amount of deception on the part of pupils. The pupil soon comes to see that the road to success lies along the way of good marks and he employs very questionable means to obtain them. Now this practice of presenting lessons has been going on for a long time in our schools. Pupils of receptive minds and retentive memories have responded to it and they have been receiving the marks that signify excellence or efficiency in work, and a good many pupils of deceptive minds have been receiving these marks. While on the other hand, the pupils who are not quick to respond to class teaching have often found themselves hopelessly wrecked and stranded. With the class method the pupil must either swim with the others or sink by himself. The helping hand of the

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teacher is rarely held out to him. If help is proffered after school hours it is given in the spirit of punishment rather than in the spirit of sympathetic help. The idea of giving this assistance as a regular part of the school work during school hours has dawned upon the minds of the very few in education. Where it has dawned the teacher is teaching and the pupils are being led to know and the aim is to teach so as to cause all to know.

The presenter of lessons is like the planter who sows good seed on a field that has been poorly prepared for the sowing; some portions of the ground may return a fair yield, while others will return almost none at all. Sowing double the amount of seed will not increase the yield. Attention must be given to the sterile and unfertile portions. These portions must be worked over and made fertile, and different portions will need different kinds of attention. By studying his soil and working it over the planter may produce a fairly uniform yield from all portions of his field, but such a yield will be the result of time and attention.

In like manner the skillful and sympathetic teacher by studying the different members of her class can so cultivate the individual minds through individual work as to secure fairly uniform results from nearly all the pupils of the class. In short they will be ready to learn when she is ready to teach. Until they are so ready, class teaching will involve much waste.

II. Individual instruction makes for good recitations.

1. By making spirited recitations possible.
2. By making *class* recitations possible.

1. The end of individual instruction is to bring the different members of the class into line so that all may participate profitably in the class work. A

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recitation to accomplish results must be full of life, must move along toward some definite end, with every member of the class contributing to its progress to the full extent of his ability. In the recitation as ordinarily conducted, a great deal of time is wasted by the teacher in hearing pupils recite who are not prepared to recite. These pupils may be unprepared from different reasons, chief among which are insufficient study, failure to understand different points of the day's lessons, and inability to grasp the lesson because of failure to master previous lessons. The pupil who fails because of insufficient study should not be allowed to take class time to stumble along through a recitation, neither should he be given much time at the individual period. He, perhaps, needs a reprimand, perhaps, some good advice. This reprimand or this advice should come early. The teacher should not allow the really able pupil to get behind before reminding him of his poor work. The point that needs to be emphasized here is, that often a teacher fails to distinguish between laziness and and some legitimate cause for lack of preparation. Find out if a pupil is really lazy before pronouncing him such. If the pupil is reprimanded it should not be done before the class except in rare instances. The second cause is the failure to understand certain points in the day's lesson under consideration in the recitation. Ordinarily when the teacher finds such a case, he stops the recitation and proceeds to teach or explain the points that the pupil does not understand, wasting thereby the time of all the class for the sake of one pupil, and making the recitation a dull, devitalized and uninteresting affair. The correct way is to note the failure, if it is a serious one, and call the pupil up for individual instruction at the next individual period, or if the failure is on a minor point, the

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teacher should call for a recitation from some pupil who can explain the difficulty.

The third reason for the unpreparedness of the pupil is his incapacity. He is not able for one reason or another to do the work of the class. The teacher knows he is not able and the pupil knows it also. Notwithstanding this knowledge on the part of both, the teacher still continues to call the pupil for recitations knowing beforehand that he will fail. This course is a source of mortification to the class, to the teacher, and especially to the pupil. Everybody who has the least human sympathy suffers. Much precious time is wasted; no good results. A great deal of harm does result. No pupil was ever brought up to the class line by this method; many a pupil has been forced out of school. With the pupil who is far behind his class the teacher should have the greatest sympathy and patience. At first little class time should be given him. The teacher should, however, take pains to ask him such questions as she thinks he can answer, exercising great care not to let the pupil know that she is asking these questions because they are easy. But when the individual period comes it is with this pupil who is seemingly hopelessly behind that the teacher should work week after week and day after day. She must not, however, let him clog the recitation period with his inability. He will, if given proper individual attention become better able each day to take part and appreciate what is being threshed out in the class; and in time will, very likely, come to be one of the able members of the class. If, however, he should not show marked improvement, the teacher should not be discouraged; for by getting into sympathy with the pupil and by letting him know that someone sympathizes with him and is ready to help him, the pupil, even though he should leave school, will

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leave a different pupil, with a different attitude toward the school, and toward mankind in general, from that he would have had if he had been crushed down and pushed out merely as one who was unfit to continue. This bringing the pupil into the right attitude is one of the greatest benefits of individual instruction.

The teacher, then, will see that no class time is wasted by the lazy pupil, by the pupil who fails occasionally or by the pupil who fails chronically. The individual period is the time at which to deal effectually with these three classes of pupils, especially the two last named.

2. Individual instruction makes a *class* recitation possible.

In the ordinary class the pupils are constantly falling out of line. In the class where effective individual instruction is employed the pupils are constantly being brought into line. Pressure is constantly being removed. The recitation is for all who are able to take part and all are being made able to take part.

In the ordinary recitation a large part of the reciting is done by the active, motor-minded pupils. These pupils are the joy of the teacher's heart. They have receptive and retentive memories and can repeat all that the teacher and the book have taught them. They do from a half to three-fourths of all the recitation work in the majority of schools, and they usually constitute from a tenth to an eighth of the class membership. The teacher working with these few pupils thinks her work is a success because the pupils know. The other pupils do not need to know, and they soon find it out. Under these circumstances it is really surprising that the mass of pupils come out of school knowing as much as they do. But with the teacher who uses individual instruction effectively it is different. She knows each pupil,

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knows where he is weak and why he is weak, and she gives him an opportunity to become strong by allowing him to take part as soon as possible in the recitation work up to the full extent of his ability. She teaches the class that the recitation is for all and that all must be ready on every point, to continue, correct, or elaborate the discussion. All who are not able are candidates for individual instruction until they are able. There is during the recitation, no scolding, no nagging, no scoring of pupils who fail. If the pupil does not know he should say so and be commended for so saying.

The teacher should bear in mind that when she is working with the four or five "brightest" pupils in her class, she is really doing the poorest kind of individual work in the poorest kind of way. These pupils do not need her attention, and still they are getting nearly all of it. The other pupils are really doing nothing for the larger part of the recitation period. Instead of being a class recitation period it is really an exhibition period for a few of the quicker minds. In a grade of thirty pupils not long ago, the writer heard a recitation in history in which four pupils did almost all the work. Not more than ten of the pupils in the class took any part. The other twenty sat for twenty minutes and apparently listened. A great many of them were far away in dreamland. By the ordinary observer this recitation would have been rated successful, and the teacher would have been congratulated on her bright class of pupils. This recitation is but a type of the majority of all the recitations in the public schools. The larger part of the classes take little or no part and they go on day after day and week after week in this way. The teacher never diagnoses the individual cases. With her the pupils are either "quick," "slow," or "medi-

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ocre"; and the mediocre and slow continue so because they have no one to help them to become otherwise.

Individual instruction is the complement of class instruction. It makes *class* teaching possible by preparing each individual mind to receive the instruction; it makes the *class* recitation possible by giving all the individuals the power to participate in the class discussions.

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Chapter Eight

THE TRAINING OF TEACHERS FOR INDIVIDUAL TEACHING

The teacher must know the child in order to teach him. This is one of the fundamental concepts of educational philosophy and we have only to point to the great teachers, Pestalozzi and Froebel among the others, to confirm its soundness. Knowing the child is vastly different from knowing about the child. This latter knowledge is an efficient aid to real teaching and should not in any way be slighted, but it is not enough; there must be also that contact of soul with soul, which brings teacher and pupil together and makes teaching a truly vital and vitalizing process.

One of the chief needs of the schools to-day is such personal knowledge of the child on the part of the teacher as will tend to meet his individual needs. In order to show that this need is a real one, a set of questions was sent to superintendents of schools of many representative cities and towns throughout the United States. The object of one of the questions was to ascertain the opinion of the superintendents as to whether the teachers as ordinarily trained in the normal schools know how to reach i. e. teach individual children. If superintendents generally answered this question in the negative, it would be fair to assume that the training of teachers in normal schools was inadequate. If they answered in the affirmative, then the assumption would be that the fault lay in the application of the teaching force in

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the schools themselves or in other words, in a misapplication of the power that the normal schools had supplied in the way of trained teachers.

These questions were submitted to superintendents of recognized standing and of considerable experience in the work of school administration, representing communities all the way from the city of several hundred thousand in population down to the town of only a few thousand. Thus the replies represent every kind of condition in public schools. To the question: "Do you think that the teachers as ordinarily trained in our normal schools know how to reach the individual child?" fifty-six answers were received. Thirty-four of these were in the negative, i. e., to the effect that the teachers as ordinarily trained in the normal schools do not know how to teach individual children. Fourteen of the answers were not interpreted either for or against, although several might be interpreted as implying that normal school training was more or less defective in the line of emphasizing the value of individual teaching.

Seven of the answers were interpreted in the affirmative to the effect that normal school training is adequate. These replies represent the opinions of superintendents from thirty states and the District of Columbia. They include the largest states in all sections of the country. The opinion of the superintendents represented is overwhelmingly that the normal schools are not training the teachers for individual instruction. There is good reason to believe that a more extended inquiry would bring practically the same results.

It is worth while to study some of these replies. Such a study will be of aid in forming a proper conception of just what the need is along the line of train-

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ing for individual work and of what ought to be done to meet this need. First let us present the observations of superintendents who think that the normal school is not training teachers so that they know how to meet the needs of individual children. A superintendent from a representative Massachusetts city writes:

1. "I am sure that they (the teachers) do not understand how or realize the importance of reaching the individual child. It seems to me that this matter should be an essential part of their training from the practical as well as the theoretical side."

2. "I think," writes another superintendent from a large city in the same state, "the teachers generally, no matter where they are trained, do not know how to reach the individual child. I think that the atmosphere of the normal schools and also of the schools themselves in which the teachers are engaged is in both cases unsympathetic so far as the importance of the individual child is concerned. The individual is the very basis of the Froebelian idea and when I get teachers trained in a kindergarten training school I almost always get the right attitude towards this question. However, as most superintendents and principals look upon this subject, it does not take long to knock that idea out of the teacher.

"There is another difficulty, and that is the radical, and as I hold them, unpractical views of those who do advocate concentration on the individual. A teacher cannot, in a class of fifty, in the ordinary arrangement of that class, jump to the ideal; but usually the agitator says that she can, and she therefore sets him down as impractical. But she can do something. She can divide her class into two, three, or four parts, or she can have special pupils for special consideration, and she can gradually lead up to an individual consideration of pupils."

The observations of these two superintendents bring out clearly the need of individual training, also the attitude of both the normal schools and of many superintendents toward individual work. The second statement is sound in stressing Froebelian principles as the basis for giving the teachers the right idea of the child's individuality. The division of classes suggested is, of course, in line with the special plans of grading suggested in another section of this study.

The writer has in mind a city superintendent who forbade one of his teachers to give individual

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instruction to needy pupils on the ground that it made such pupils dependent. He failed, of course, to distinguish between coaching and teaching, and deprived the teacher of the opportunity of doing much good.

3. "I should say," writes a superintendent from Indiana, "that the teachers, as they come from the normal school, have only a theoretical preparation for work with individual children. I find even after they have practiced under a skillful teacher for a half year, that they still are slow in applying their psychological and pedagogical knowledge. This, of course, is not at all strange and only experience directed in such a way that the individual is emphasized can strengthen this weakness."

A superintendent from Alabama writes:

4. "Normal training is deficient in this respect."

One from California:

5. "Not nearly as well as they should (be trained)."

A Connecticut superintendent, a recognized authority on school administration, has this to say:

6. "Only the teacher of natural teaching disposition ever cares for the individual, which is the essence of good individual teaching. Normal school training *tends* to destroy this love for persons, but does not always or even often destroy it."

A superintendent of a large city in Illinois writes as follows:

7. "Of course it depends upon the normal school, the instructors in some giving considerable attention to the individual child idea, but I think the majority fail in this respect and either never acquire this ability or else the first year is spent floundering about in a vain endeavor to adapt themselves. One difficulty with normal teachers is that they are so well satisfied with themselves that they are unable to appreciate the peculiar needs of individual pupils in the public schools."

8. "I have to state," says a Kentucky superintendent," that the teachers as ordinarily trained in our normal schools scarcely ever know how to deal with the individual child."

Again from a Michigan superintendent comes the statement:

9. "I am quite strongly convinced that our normal schools do not train teachers sufficiently in the direction of reaching the individual child. The emphasis, as I observe it, is placed almost exclusively on class instruction. While this is important it should not exclude instruction in individual work."

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Another Massachusetts superintendent observes:

10. "Our normal courses are too short to give their students any great skill in handling any but the generally normal child and their methods are bound to be crude. They are not skillful in their work. If they know thoroughly the underlying principles, they will in time become skillful in adapting them to the need of the pupil."

In criticism of this opinion it may be said that experience has shown that very few experienced teachers have any adequate idea of what individual teaching means and that the more experience they gain in class work the further away they find themselves from the right idea of individual teaching. Furthermore very few of the normal schools give any knowledge of the underlying principles of individual instruction and still fewer give any opportunity for the apprentice-teacher to apply such principles under skilled supervision.

It is unnecessary to give more opinions from superintendents who think that teachers are not adequately trained in our normal schools to do individual teaching. The opinions quoted show the general tendency of thought in this direction.

There are, on the other hand, a few superintendents who think that our normal school teachers are adequately trained. It is only fair to give them a hearing.

A well-known Massachusetts superintendent gives this answer to the question we have been considering:

"It is a very difficult matter for a normal school to make veteran teachers in a two years' course. It can do little more than put the young teachers on the right road and trust to experience under proper supervision to keep her there. I think that the Massachusetts normal schools are working in general along right lines."

Another Massachusetts superintendent of ability and long experience replies:

"Judging from the work of the ——— Normal School I answer 'Yes.'"

A Colorado superintendent writes of these teachers that "at the time of their graduation they are just

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beginning to know": while the superintendent of a large New England city answers emphatically: "I most certainly do."

Out of the fifty-six opinions, there are only seven that would seem to endorse the present training of teachers in the direction of reaching the individual child.

It may be stated that the author of the first of the four opinions just given is a firm believer in class instruction and it would be natural for him to think that teachers trained wholly for class work were sufficiently trained for individual teaching. The three other superintendents who express opinions favorable to the present system of training are, however, strongly in favor of individual work as an aid to class work. It is gratifying to know that these few superintendents, at least, have found their teachers prepared to give individual instruction.

A visit to schools in different parts of the country will, however, convince anyone who has a correct idea of what individual teaching means that not only does the young teacher fresh from the normal school have little idea of the methods and aims of individual instruction, but the teacher of experience is, in ninety-nine cases out of every hundred, even more ignorant. Nor is this strange when we take into account that the principles governing the technique of individual teaching have not been taught to the normal school graduate nor are they available in printed form to the older teachers.

What the Normal Schools are Doing in the Way of Training Teachers for Individual Work

The next step in the study is to find what the directors of normal schools are doing and thinking along the line of preparing teachers to meet the needs

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of individual children. To this end questionaires were sent to many of the normal school principals in the different states.

They were asked to answer along with several others this question: "What is done in your normal school to train pupil-teachers to teach pupils who for one reason or another need individual aid?" The principals replying to this question represent normal schools in thirty different states, so it is safe to assume that the facts stated present conditions as they exist in all parts of the United States. It is worth while to consider some of these answers as they present information that is nowhere else available. A number of these replies are here given.

1. "Instruction in child study has dealt especially with these (pupils): a room (practice training) for backward children has been maintained; girls in regular practice training rooms are especially charged with work with such pupils."

2. "The students spend twenty weeks in the public schools. During that time they are constantly required to give individual help to backward pupils.

3. "In the course in school economy, the normal student's attention is called to the class of children referred to above. Their needs are discussed and suggestions are made for meeting these needs. In the training department such pupils are taken out for individual tutoring, and that seems to be helpful. They are examined as to their eyes, ears, and teeth as well as for adenoid growths, and recommendations are made to the parents for their correction. When such corrections have been made, the attention of the student teacher is called to it so that she may watch results."

4. "In my own course in pedagogy, I place a good deal of emphasis on the needs of individuals, and discuss with my students several plans for individual instruction that have been most favorably received by educators. In addition to this we give as much attention as possible to individual instruction in the practice school but not in a particularly systematic way. In the ——— school in this city, each of our seniors has an opportunity to work one week under the group and individual system."

5. "A great deal of attention is given in the practice school at ———, to the individual, both by himself, in groups, and in his class. Individual pupils are assigned to pupil teachers. The pupil teacher has groups of children, and she works with divisions and with a whole class. This is what the principal of the practice school says upon this point: 'The pupil teachers in the practice school begin work with individual pupils as soon as they begin their practice school work, and

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continue it throughout the course. At the same time, however, they have an opportunity to work with a division, or an entire class at times that they may develop power to handle a class and get a standard of good grade work."

6. "As part of her psychology work, each pupil makes several minute studies of individuals. In the training school, she will assist individual pupils as occasions arise for such help."

7. "We have individual instruction where the needs of the pupils require it and make some adapted applications of the Batavia system."

8. "They (apprentice teachers) are taught theory and given practice."

9. "In our training schools there are not enough defective pupils to need the individual aid that you mention; at the same time we constantly assign pupil teachers to the business of bringing up pupils who are back in their work, due to sickness or absence or any other reason: it is very interesting to us *how normal* pupils are as regards their personal qualifications and progress."

10. "We assign such pupils to training teachers who give them individual instruction and make special study of their cases."

11. "The pupil teacher is directed by the critic-teacher and the superintendent of the practice school as to the best way to aid the backward pupil; sometimes this is done in class hours; sometimes out of class. We are giving more emphasis than ever before to training pupils in the fine art of study, especially those who seem never to have discovered how."

12. "Personally I do not believe in *training* to the extent that it seems to be believed in by New Englanders and by some of the new and youthful professors of education in teachers' colleges of universities. I think the *dog* and *pony* show illustrates the "high water mark" of training. Our effort here is to secure high intelligence and the greatest possible adaptability so as to accustom students to rely upon their own initiative for difficult situations. We, therefore, do very little of training for the instruction of individual children."

It is hard to see just how the conclusion here given follows from the premises.

13. "Very little more than is done or attempted in any school where the inadequacy of the 'all class' method is appreciated, but no systematic or organized effort is made to meet the need. We do provide for some of the kind of work suggested in your next question but it has not been done in a very general or regular way."

14. "The Critic Teachers and Principal make a close study of individuals and their needs when they are in the practice schools, and advise with the 'Pupil Teachers' concerning these matters, sometimes suggesting and sometimes directing that individual help be given where needed. Our senior normal students teach during the entire senior year, both class and individual teaching being their portion. We thus endeavor to habituate them to a thoughtful and systematic procedure in relation to the 'one' not the 'many,' although, of course, the latter is ever a problem in schools everywhere."

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15. "We follow substantially the plan you suggest in '2' and I believe it good for both pupil and teacher."

16. "The work in psychology has this in mind. The pupil teachers are given turns at such kind of practice teaching. The supervisor of practice looks after this as well as the regular class teaching by pupil teachers."

17. "We stress this kind of work. Some student teachers give a large part of their time during the spring term to this kind of work. The children are taken to a separate room and given this kind of work while others are reciting to supervising teachers or some other teacher."

18. "Study, observation, and some practice in connection with Chapter XIV, Bagley's Classroom Management, also a consideration of Pueblo, Pocatello, Shearer, and New York City group plans. We give special aid at the study lesson and special attention at the recitation lesson.

"Small groups of such pupils are formed wherever necessary and students teach them under the direction of critic teachers."

19. "Special effort is made to help individuals in our training schools and a large part of it is done by students of the normal school who are practicing in the various grades. The aim is to have each child advance as fast as possible."

20. "Additional student teachers are assigned so that they may be taught to give individual instruction and that it may be given in the least time possible, consistent with thorough work."

21. "In the first place our student teachers understand that in the lower grades in the elementary schools, pupils should be taught to some extent individually even when they are taught in classes, and that some of the class instruction should be individual direction and guidance at their seats or at the teacher's desk. Besides, especially in the elementary grades, we usually have two or three groups of pupils who need a great deal of individual attention. Certain students are assigned a group of pupils to be taught by them individually in quite small groups.

22. "We have no systematic organization to train teachers to teach retarded pupils. We train them to recognize retarded pupils and to group them and to help them individually all that is possible in order that they may be given something helpful, but we have no systematically developed room for this specific purpose. I am inclined to think it may come to that, but on the other hand it looks to me as if the general public school teacher had to be trained to recognize these pupils and to arrange their work so that she may be able to give them individual aid. With the exception of the large cities, special teachers for retarded pupils are not going to be employed, at least in the near future, so we shall have to work it out along with the regular pupils that are of normal standard.

23. "General study of conditions which lead to defective work in individual children is made a definite part of their (pupil teachers) last term of psychology. Each student is given certain special students (pupils) to study while teaching in the training schools. Determined effort is made to interest each student teacher in backward and special cases."

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24. "i. Particular attention is given to the psychology of individual differences as stated in Thorndike's Principles of Teaching.
"ii. Even small classes are usually sectioned on the basis of ability and practice teachers are enabled to help in this sectioning.
"iii. The meeting of individual needs of backward pupils is assigned to practice teachers.
"iv. This individual coaching is closely supervised."

A summary of the foregoing statements reveals indications of progress in the line of attention to the needs of individual pupils.

The needs of such children are studied in courses in child study, pedagogy, school economy, or in psychology at several of the normal schools. One normal school makes a special study of the various plans that have been devised for better adapting school work to the needs of the individual. One, at least, has the teachers pay particular attention to detecting physical defects of eye, ear, nose, or throat of the pupil, and when such defects have been remedied, the pupil teachers watch for results in the improvement of the work of such pupils. Two of the schools report that each of the pupil teachers makes a detailed study of several individual children. In some schools the pupil teachers are taught to reach the individual by breaking the classes into small groups; in others the pupil teachers take needy pupils to other rooms for special help; in still other schools, a modified use of the Batavia System is in vogue, under which the pupil teacher teaches individual pupils in the regular class room while the room teacher is engaged in class work, thus anticipating the plan advocated in another section of this study. In a few schools serious thought seems to have been given to this question which as one school man puts it, is the "central problem" of school instruction. In such schools the individual work is carefully planned for and as carefully supervised. Some normal-school men confuse individual teaching with tutoring and coaching. Individual teaching if rightly

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done is neither tutoring, nor coaching. Tutoring and coaching consist largely in helping the pupils along, in doing their thinking for them; individual instruction never does this; if rightly employed, it helps the pupils to help themselves by developing power to think. The former kind of work makes for weakness, the latter, for strength.

A Plan for Training Teachers

It is clear to those who have given the problem much study that if real progress is to be made in the way of training teachers to reach individual pupils effectively some definite plan of procedure must be mapped out for attaining the desired end. Such a plan is suggested in the following question which was one of those in the questionaire to superintendents and also in that sent normal school principals. It reads thus:

"Would not the plan of having the pupil teachers, as a part of their training for a few months at least, do individual work with the needy and backward pupils (such work to be done during the regular school hours while the room teacher is at work with the class) result in giving such teachers a broader and better idea of the teaching process and bring them into closer sympathy with children in general?"

Of the fifty-six superintendents who replied to this question forty-eight answered in the affirmative; i. e. to the effect that such a plan of procedure would result in training pupil-teachers to better meet individual needs. One superintendent answered in the negative and seven gave answers too indefinite to be interpreted either for or against the plan. Of the thirty-four normal-school principals answering the question, twenty-one answered in the affirmative, three in the negative, while ten answers were such as "probably"

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or indefinite explanations that could not be counted either for or against the plan. It is plain that even if we should count the answers rated as "indefinite" as negative, a large majority of the superintendents and the normal school men are in favor of some such plan for giving the apprentice teachers more definite training in dealing with individual children.

Many of these answers are worth quoting. A number from each group are given:

1. "The plan suggested is in some measure carried out in our practice school. I am in hearty accord with the idea."

2. "Certainly."

3. "Doubtless."

4. "It would be an excellent plan to give each pupil teacher some practice in giving individual instruction to pupils whether backward or not. A clearer view of the psychology of learning would thus be revealed to the teacher."

5. "In my judgment the plan suggested would result in great gain to the slower pupils. In fact, I have much admired the Batavia plan in this respect."

6. "Yes: I think such work could be done with the practice teachers and we often do some of this work with practice teachers. A pupil teacher is detailed to do work with a backward pupil because of some defect, having lost time, defective eyes, ears, or brain. Sometimes two or three pupils of this sort are given instruction together."

7. "The normal schools find it difficult to secure facilities for practice under which they can train teachers to handle individual pupils as well as classes. Not one practice school in forty in America is sufficient to the situation."

8. "Certainly. All normal students should come to understand that many pupils in every school require considerable individual instruction and that the teacher must know her pupils individually and adapt her instruction to them. Even though a class should be as well graded as practicable, the fact that a dozen or twenty pupils are taught together in a class should not obscure the duty of the teacher to know the individual needs and progress of her pupils and have individual help and guidance in view."

9. "Certainly We've tried it."

10. "It would be a capital idea. We cannot do it for lack of room."

11. "Yes. This is what we do. We stress this idea, 'Teach children, not books.'"

12. "We do this very thing. This individual work of the pupil teacher precedes her class work."

13. "Yes, undoubtedly."

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14. "We do this and encourage our student teachers to do all they can along that line."

15. "It is a very excellent idea and it is practieal."

16. "I think the plan would yield good results. We have found it does whenever we have been able to work in that direction."

17. "Our plan suggested above provides for this; but we do not limit the work to the 'backward.' We endeavor to make the matter of classification of pupils flexible in the better sense; therefore many of the pupils are able to earn an extra promotion by receiving a little help. It does not seem desirable to limit the teachers so-called extra help to the Retarded or to the Born-shorts; the important thing is to keep each child educatively busy up to the limit of his powers and capabilities,—not merely 'busy,' however. In my judgment the Normal School that does not provide for this kind of training of its students falls short, very short, of a fairly good ideal."

18. "My answer is: Perhaps so. But the nature of our situation here is such that we could not get very many students to participate in giving instruction to individual children. Students here are very independent. They, up to the present time, get the best positions in the profession throughout a territory about one hundred and fifty to two hundred miles in extent. They have to leave us before any such specialization is attainable. Moreover, the health and general tone of the children in our part of the state are so good and the means of classification such that there would be little call for the special training which your question refers to. And even if such special instruction were necessary in the actual school, I do not see how we could attain very desirable results by such *training*. In our academic classes we occasionally call weak students or very bright ones aside and have them individually coached a little; and pretty nearly every day some of our teachers have some students remaining after school hours to receive special help, but this practice is quite common in the schools of Missouri, and does not, as it seems to me, need very much attention in the Normal School. It is such a natural thing. It results from good intelligence and sympathetic attitude towards those taught."

It may be said by way of comment on the views just expressed, that the occasional help referred to is in the great majority, i. e. almost all schools, so occasional as to be of slight account. Furthermore the intelligence and naturalness attendant upon keeping pupils after school to learn what the school during the regular hours has not given them a fair chance to learn, may well be challenged. The teacher who has been well trained in the principles of individual instruction will be able to find a more natural as well as a more intelligent way of reaching needy pupils than by keeping them after school hours.

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19. "I see no objection to your proposition to have a teacher assigned to the needy and backward pupils. At the same time our experience would lead us to think that the number of needy and backward pupils is not very large in the majority of schools and that the conception of a need of individual instruction is very easily exaggerated. The best plan that we have found is to classify each student in work that he can take in the elementary schools according to his progress and ability in each subject. This is possible if one has a uniform program so that arithmetic is taught all at the same hour and other subjects likewise."

20. "No. The great need of girls who come to this Normal School to become teachers is a broad, comprehensive knowledge of children as a whole,—as a type of mankind; not unusual children in any respect, peculiar or subnormal children, but plain, matter of fact, every day children. It is correct neither psychologically nor pedagogically, to have beginners in any form of learning, take up, at first, exceptions. You people who think so are not educationally sound. Neither the race nor the individual works upon these lines. Pupil teachers have no breadth of view. They are selfish, egotistical, and provincial in their interests. When they have been taught general conceptions concerning children, let them begin to take up the peculiar work of the care of the needy and backward children."

21. "No.—Just the contrary. The pupil teacher needs contact with numbers of children rather than with a few individuals."

22. "I do not believe in this method to any large extent."

The Technique of Individual Instruction

The real artist gets close to his canvas and a knowledge of the technique of his art enables him to give an effective touch now here, now there, and to bring his whole work nearer the ideal. He works now on this individual part, now on that, with a view to the greater unity of the whole. It must be so with the artist teacher. The knowledge of the technique of the art of teaching must lead him to touch now this pupil now that pupil in such a way that each may be brought unto unity with the class. In this way class work may become a harmonious work of art.

There is a technique of individual teaching, a knowledge of which, combined with the knowledge of the technique of class teaching, will enable the teacher by intelligent practice to so touch the minds of the individuals in the class as to make the class work a unity. Some of the important principles

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governing the technique of individual instruction have been rather definitely formulated. These principles must be mastered by the teacher who would do effective individual work. Here are a few of these principles:

1. First, the aim of individual teaching is to develop power in the mind of the pupil taught, without reference to any standard other than the pupil's own best good. This, of course, must be the only aim of individual teaching in the special school for defective children. In the regular school, however, this primary aim may be supplemented by the secondary aim: to bring about class unity. Class unity is very different from class uniformity. Class unity does not mean that every pupil will be able to do what every other pupil in the class can do. It merely means that each pupil is so taught that he can pursue the class work with profit.

2. Individual teaching must begin where the pupil has real knowledge. It is to go back until it finds the pupil's preperception or apperception mass and there begin to build. Recognition of this principle is fundamental to success in individual teaching; yet failure to recognize it is the most common fault of teachers who employ individual instruction. They are so anxious for the pupils to progress rapidly that they help them on the lesson of the day, and, as the pupil has no sure foundation on which to build, such individual teaching is largely a waste of time. The teacher who would really teach a needy child must go back, back, back until she strikes the rock of real knowledge in the mind of the child. Thus a teacher may need to teach an eighth grade pupil some principle that should have been mastered in the fifth, fourth, or even the third grade. This is what many individual teachers fail to do, and this is why they fail. There must

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be a solid foundation before there can be a permanent superstructure.

3. The teacher must lead the pupil to master the difficulties for himself. This is done by not telling him anything that he can be led by judicious questioning to discover for himself. If, however, the teacher finds the pupil has not sufficient data in his mind from which to draw right conclusions, she tells him the necessary facts at once. Telling at the right time is true teaching. Furthermore, the teacher does nothing for the pupil that he can do for himself. It is, of course, much easier for the teachers to show pupils how to do certain things than it is to lead their pupils to do the things for themselves. To say to a pupil—"This is the way. Don't you see how it is done?" at the same time doing the work for the pupil requires little effort from the teacher. Such procedure gives the teacher practice but leaves the pupil weaker than before. It is quite a different thing to find out just what a pupil knows on some point and with this knowledge as a basis, lead him to master some new and more difficult thing. It is hard and often slow work, but it counts. The development method is true teaching; the showing method is its counterfeit.

4. The teacher must discover the pupils who need aid; she must not wait for the pupils to ask for aid. If the teacher's work is wholly individual she must hold frequent conferences with the regular class teacher with regard to the needs of different pupils. She may also now and then spend the whole or a part of the recitation period watching the regular class work in order that she may see just what the different pupils are doing in class work. This will give her a better basis for individual work. The class teacher will, of course, keep a list of those pupils whom she is to refer to the individual teacher with

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notes as to their difficulties for the guidance of the individual teacher. Examination of the daily written work, and also of the tests will reveal the weak points of many pupils. It is really astonishing how little the ordinary class teacher knows of the weak points of the individual members of her class. This lack of knowledge results from not studying the pupils individually. Such individual study is a requisite to effective teaching.

There are, of course, many other ways to discover the deficiencies of different pupils. The chief thing is, however, for the individual teacher to find those pupils who most need her aid. If she pursues the policy of waiting for pupils to ask for aid she will find herself aiding many pupils who really need no aid and neglecting others who need aid most but will never ask for it, if left to take the initiative.

It may, however, be well at some period during the day, or perhaps at two or three periods during the week, to give opportunity for any pupil to ask for aid. Such periods may do much to combat the idea that the individual periods are for the slow pupils only.

5. The teacher must take a positive, patient, sympathetic attitude towards the pupil to be helped. There is no greater motive to effort in any line than to have someone say "I believe in you." The teacher must believe in the pupil, must believe that he is going to improve and must be on the watch for even slight manifestations of improvement; yet she must not be impatient if these improvements are not apparent even after weeks or months of work. The soundness of this principle is proved by the work with mentally defective children whose improvement is often due to years of patient endeavor on the part of the teacher. It is the positive, patient, sympathetic attitude that does much to make the individual work effective.

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6. Individual instruction as a rule should be given in the regular schoolroom, in the presence of the class but apart from it. The individual teacher calls the pupil needing aid to her desk; she does not take him from the room. He works in the presence of his mates and after a few minutes of work he returns to his seat among them and another pupil takes his place at the individual teacher's desk. In this principle is involved the psychology of class membership with all that it means to the individual pupil. The pupils who are sent from the room for individual help are differentiated from the other members of the class and they feel it. The classroom is the child's school home and he should be kept in it so far as possible. Furthermore, the teacher who receives pupils for individual instruction in a room apart from the regular classroom cannot know the pupils as she can by seeing them and working with them in the regular classroom. Of course, it must be admitted that individual instruction given by a second teacher outside of the regular classroom will be productive of valuable results; yet, we believe that the contention above made will be borne out by facts gained from experience.

7. The teacher should as a rule help only one pupil at a time. This is the only way to give real individual instruction. Two or more pupils make a class and unless they are weak on exactly the same point, one must wait while the other works.

These are some of the fundamental principles which must be observed if a teacher is to succeed in individual teaching. The significance of these principles is rarely if ever understood by teachers in general. The normal schools must teach these principles and emphasize their importance, if the graduates of these schools are to be effective individual teachers.

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Chapter Nine

ADJUSTMENT OR UNGRADED CLASSES

When our schools are adjusted to the needs of individual children there will be, in addition to the regular classes which will care for the great majority, Rapid or Promotion Classes for the gifted pupils and Adjustment or Ungraded Classes for the retarded or slow, but not abnormal pupils. Goddard's study showed that about 15 per cent. of the pupils in the first six grades of the public school system he investigated were in need of adjustment classes.

The individual supervisor, or as someone has called her, the class mother, or life-saver, will be the mediator between the regular classes and these special classes, taking care to see that no pupil is out of adjustment.

The Mannheim system, as we have already pointed out, makes provision for the slower pupils in a special division of so-called parallel classes, and this plan has been adopted in some other cities in Germany and in a few other countries. Associate Superintendent Straubenmiller of New York City suggests in the New York City School Report for 1910, a modification of this plan for New York City.

The general plan, however, in this country is to provide for such pupils so-called Ungraded Classes, corresponding very closely in organization to the old country school.

These ungraded or adjustment classes, when they are properly organized, are for the normal pupils only. The aim should be primarily to enable the pupils placed

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in them to strengthen their weak points so that eventually they can be returned to the regular classes; these classes should also be attended by such pupils as may be a little out of adjustment, due, perhaps, to sickness or a change of residence. There can be no better name for them than adjustment classes. The teacher of such a class is the regular adjuster and the individual teacher or supervisor, is the special adjuster. There has been a loss somewhere, somehow, and these skilled adjusters are making it good.

In a large school there should be at least two of these "adjustment classes"; one composed of pupils representing the first four grades, the other of those of the last four grades. It should be kept in mind that these adjustment classes in no way correspond to the so-called ungraded classes in New York City which are really classes for mentally defective pupils and would much better be called "accommodation classes"; in them the school work is arranged to accommodate mentally defective pupils. In the "adjustment class" the pupils are being fitted to work in the normal classes, while in the Promotion or Rapid Classes of which we have spoken elsewhere, the gifted pupils are trying to cover the course of study in less than the regular time. It is unfortunate that so much confusion exists in the nomenclature of special classes.

The Schoolroom for the Adjustment Class.

It hardly need be said that a room in order to be a place of hope and opportunity should be large, clean, bright and cheerful, and well-equipped with the necessary books and apparatus. Too often such a class is assigned to some dark, dingy, ill-equipped room; and the class which needs the most gets along with the least. The time is coming when the school houses will be planned in such a way that these rooms will be

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provided. A building planned to accommodate eight regular classes should have at least eleven classrooms.

Number of Pupils in the Adjustment Class

If a single teacher must handle the ungraded or adjustment class there should never be more than 25 pupils, and 20 is a better number; 25 can be accommodated if the individual teacher can spend at least an hour a day in the room, while 30 or 35 pupils may do superior work in such a room if there can be an individual teacher who can devote a half day or more to the needs of individual pupils. Indeed, the opinion is ventured that such a room can never become a true place of hope and encouragement until there is one teacher to do the class work and another to do the individual work. Then things really move and results are accomplished.

The writer has had the supervision of such a room at Westerly, Rhode Island, for several years, where two teachers, one doing class work, one doing individual work, have worked with from twenty-five to thirty pupils (a few of the pupils being subnormal). The results in this room have fully justified the added expense of the extra teacher. One boy who started in the lowest division of this room (a first grade) four years ago was this year, owing to the start he received there, promoted to the eighth grade. Under the regular class plan he would doubtless just be entering a fifth grade. The writer is almost convinced that an adjustment class cannot really become an efficient instrument until it has the individual teacher to aid the class teacher in strengthening the weak places in the class.

The Teacher

The teacher of the adjustment room must believe in her own power of accomplishment as a teacher and

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in the ability of even the slowest child to make progress. She must be rated plus on humanity, sympathy, patience, and cheerfulness. In addition she must be a skillful teacher in all that the phrase implies, a learner whose mind is ever open to new truth.

She must know the human mind, especially the child mind, and how it unfolds and in order to know that she must know the whole nature of the child; she will then have a genetic view of life from its very beginning.

To such a teacher, the work of guiding children will never seem a narrow, tedious grind. Such a teacher can inspire, can teach, because her own soul is aflame.

The equipment of the individual teacher has been described elsewhere.

Course of Study

The course of study for the Adjustment Class need not differ materially from that for the regular classes except that the pupils' weak subjects should be stressed; and, if need be, a pupil should be allowed to drop a given study for a time in order to put more time on work in which he may be weak; or a pupil may have "gone stale" on a certain subject and thus need to drop it for a time until he can take it up with new zest. The writer knows of a case where a bright boy became dull in arithmetic. His mother consulted a well known psychologist who advised that the boy drop arithmetic for a time which he did with the result that later he took up the work again and carried it along with success. Sometimes the ding-donging process needs to be modified.

Adjustment Classes in New York City

In addition to the so-called "ungraded classes" which as we have seen are really auxiliary or "accom-

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modation" classes for mentally defective pupils), New York City provides three types of specially graded classes called C, D and E classes. The C classes are for non-English speaking children who need to be taught English as rapidly as possible in order that they may take their places in a regular class; D classes are for "certificate pupils" who are soon to be fourteen years old, (the minimum age limit for school attendance in New York) and will then leave school to go to work. In the D classes such pupils are given instruction in the "essential" subjects in order that they may reach the legal requirements as to scholarship before leaving.

E classes are for over-age pupils and are designed to enable these pupils to make more rapid progress than they could in the regular grades, and thus be able to gain extra promotions. An interesting study, showing the efficiency of the D and E classes is made by City Superintendent W. H. Maxwell in his annual report for 1910, pp. 97 to 103.

Adjustment School in Syracuse, N. Y.

The ungraded or adjustment school of Syracuse, New York, according to the late Superintendent A. B. Blodgett "suitably provides for the needs of children who are overgrown, that is, large for the grade in which they would necessarily have to recite, and are backward from such causes as absence from school, and sickness"; pupils who find it necessary to work a part of the time, those who are out of adjustment through change of schools; some pupils who can do the work in less time than the pupils of the regular grades. To this school are admitted only pupils of the sixth, seventh and eighth grades. The teacher of this school, Miss Falvey, writes that so far as she knows there is no other school like this in existence.

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Miss Falvey thinks that some sort of tests of a practical character would be of advantage to determine the mental status of some of the pupils whose parents expect them to do more work than they are capable of doing. Such tests would show the parents what to expect of their children.

She is also of the opinion that work done in such a way as "to call the physical activities into play helps with the mental: e. g., pupils accomplish more when working at the blackboard than when set the same tasks at their seats."

For the adjustment class Miss Falvey would select a teacher "with an infinite amount of tact, enthusiasm, determination, energy and optimism. Perfect health and no 'nerves' are very essential. The teacher should have had a varied experience, including dealings with the various classes."

Adjustment Schools in Los Angeles

That these schools have been a valuable means of diminishing suspensions and corporal punishments is shown by the following table taken from the report of Assistant Superintendent M. C. Bettinger of Los Angeles:

"To show the influence of these rooms in the reduction of corporal punishment and suspensions, I feel that it is worth while to reproduce my tabulation of last year's report, and to add to it the corresponding items for this year.

Year	Suspensions	Corporal Punishments	Enrollment
1902–3	218	494	30,909
1903–4	199	483	34,326
1904–5	132	441	37,877
1905–6	116	377	.....
1906–7	72	254	42,998

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Other influences have been at work to assist in this movement of diminution of undesirable features of our work, but the ungraded room has been the main agency."

The Ungraded Rooms of the Los Angeles, Cal., school system during the school year 1907-8 enrolled 1006 pupils; of this number 392 were admitted on account of age and size, 236 as a means of correcting deportment, 187 because they "had been out of school one year or more and could not enter a grade."

It would seem, however, that the best good of all the children would demand that the "adjustment class" be not used for disciplinary purposes, especially in large cities where there are enough pupils to form regular disciplinary classes; such special classes, it seems to me, might be designated as "training classes."

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Chapter Ten

PROMOTION CLASSES FOR GIFTED PUPILS

Democracy should not keep talent in the quarantine of mediocrity. Thus the discovery and fostering of talent and the setting it to work in the interests of society should be one of the main aims of education in a republic. Society is just beginning to see that equality before the law must not be confused with natural equality. This confusion has doubtless led to some delay in society's concern for the highest development of its human resources. In the old form of caste education, the son could not rise above the station of his father. The fear that a differentiated education would develop caste has, doubtless, led many to assume that in a democracy all should be educated alike. This fear is well founded if the development of superior powers leads, in general, to a drain upon society in the way of wasteful luxury, inordinate pleasure-seeking, and immoral example, evidenced by a degenerate, ease-loving progeny. But democratic society is coming more and more to see that this following of false ideals of life by some of its members is due to its own failure to provide proper educational opportunities for all its children. The people's schools have all along been cheap schools, far too cheap to be educationally efficient. This fact has led Dr. C. W. Eliot to assert that American schools can never do their work well until the people make some approach to paying for public education what many parents are now willing to pay for the private education of their children. Dr.

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John Dewey never said a wiser thing than this: "What the best and wisest parent wants for the education of his child that should the community want for all its children." Some writers and speakers, more prominent than wise, are forever dinning our ears with statements concerning the vast sums the nation is expending for education, which in the aggregate seem amazingly large, nearly $400,000,000 for 18,000,000 children; an expenditure, however, when looked at from the individual side, of less than twelve cents a day per pupil. Almost no American community spends twenty-five cents a day per pupil for education; yet even the moderate-priced private schools charge at least a dollar a day per pupil for tuition alone.

Public schools can be made better than the best private schools for a reasonable expenditure, but to be reasonable it must be much greater than the present expenditure for school purposes. In many places school officials are kept in office because they can manage the schools on a small expenditure of money, not because they can make the schools more efficient.

Why should it be a matter of surprise for a man of means to send his sons and daughters to the public schools? The reason why public education often gets such scant attention at the hands of legislators, both state and national, is because the leaders in such bodies often have little real personal interest in public education because their own children are in private schools. Witness the penurious policy of Congress toward the National Bureau of Education in its recent attitude toward appropriating some $75,000 for establishing special lines of educational research.

Society can never suffer from the evils of the caste system if it is willing to provide proper education, not cheap education, for all its children, to the extent of conserving and developing human power wherever

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found. Under this scheme normal, subnormal and supernormal members of the community will each be provided with educational opportunity, and encouraged and aided to develop up to the full extent of individual ability.

Our educational scheme has been organized to fit the average normal child. Until very recently it had never occurred to educators to differentiate the educational scheme to fit different degrees of mental endowment.

In speaking of the establishment of special schools in America, a German writer in *Die Hilfsschule* states that their development has been slow because their establishment was thought to violate the democratic ideal of human equality. This ideal has had to give way before the advance of scientific knowledge, especially in the realm of the psychology of the feeble-minded. It is now generally accepted that these mentally weak members of the human family can never by any human means become normal men and women. They can, however, by specially organized schools with a special curriculum and specially trained teachers be vastly improved in their mental, moral, and physical condition, and to a greater or less degree made self-supporting, and by proper supervision made less a menace to society.

Society has of late years given a great deal of study to the subnormal or feeble-minded child, although much remains to be done even here. No doubt much will be done in the next few years in the line of investigating the pathological causes of mental retardation in normal children.

Lugaro[1] points out that "Investigation into subjects in whom the mental deficiency is very slight, into the so-called deficient or backward children, would be of especial interest because they already present from

[1] Modern Problems in Psychiatry, p. 234.

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the clinical and psychological sides many differentiating signs which in all probability are dependent on extremely diverse pathological processes." We may thus some day discover the neural causes of backwardness.

On the other hand almost nothing has been done to investigate psychologically or in any other manner the possession of superior mental endowment by certain children.

We do not know how many such children there are in the average community. We do know that about 1% of the children of school age in a given community are so feeble-minded as to need special schools, that from 7 to 10% more (Goddard says 15%) are so backward as to need supplementary teaching in the way of individual help either by special individual teachers (Batavia Plan), by Parallel Classes (Mannheim System), or in the ungraded room (Adjustment Class). We do not know, however, of the 85 to 90% of the school children who remain, how many are gifted with superior mental powers to such a degree that instruction should be differentiated for them.

Dr. F. G. Bonser[2] thinks that "perhaps the worst type of retardation in the schools is withholding appropriate promotion from those pupils who are the most gifted, therefore of the most significance as social capital." This statement is made as a result of a study of the reasoning ability of children of the fourth, fifth, and sixth grades. Dr. Bonser found that many children of the fourth grade had mental powers superior to many children in the sixth grade, yet the graded system made no provision for the adequate development of these powers.

Dr. G. M. Whipple of Cornell, it is reported, will soon open a clinic to be especially devoted to the study

[2] The Reasoning Ability of Children of the Fourth, Fifth and Sixth School Grade. Teachers College, 1910.

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of the supernormal child. In commenting on the fact, Dr. J. E. W. Wallin[3] makes the assertion that the supernormal child has been most neglected of all, due, he thinks, to the fact that the children on the plus side of the efficiency curve are not so numerous as those who constitute the retarded group, and to the fact that they do not trig the wheels of the school machine. "But the supernormal, or precocious child, is the incipient genius."

Dr. H. H. Goddard[4] in his recent study of some 2000 school children of a certain school system is authority for the statement that about 4% of the children in the public schools possess mental power so superior to the average child as to demand special opportunities in the way of special classes and courses of study for their development. For ascertaining the degree of mental ability, or mental age, the Binet-Simon tests were used. Children whose mental age was more than two years above their chronological age were considered as possessing mental power sufficient to entitle them to be designated as "gifted." It is to be doubted, however, whether a child who exhibits power to answer the questions three years above his mental level could thereby be considered so gifted as to require special educational advantages without further tests. The child's previous environmental conditions may have played an important part in giving him knowledge sufficient to answer many of the Binet-Simon questions.

The suggestions of Meumann[5] along the line of determining the degree of mental endowment (Begabung) by finding the relation between practice and

[3] See article, Clinical Psychology and the Psycho-Clinicist, p. 123 Journal of Educational Psychology, March, 1911.

[4] See article, Two Thousand Children Measured by Binet Measuring Scale of Intelligence, Ped. Sem. June 1911, p. 236.

[5] See Vorlesungen, Vol. II, pp. 375-6.

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ability to execute, by establishing norms of performance by which we may measure marked general or special ability in individual cases and by ascertaining the degree of spontaneity that characterizes certain activities and what is closely related, the natural impulse to certain kinds of work, will doubtless result sometime in standards of direct use to schools.

Dr. William Stern of Breslau says in a recent article that society cannot afford to neglect the supernormal or gifted children. He does not mean by the supernormal the genius in the sense of Galton and Baldwin, but the child "that possesses in quantitatively superior forms capacities that are generally exhibited by individuals at large." According to Stern there are two types of gifted children, the specifically, and the universally supernormal. To the first type belong children who are exceptionally gifted in any one line such as music, mathematics, drawing, or painting, the technical arts, or in the learning of languages; to the second type belong children who seem to be endowed with superior mental powers in all lines of activity. "Those who belong to this group are the great intellects."

Stern cites the investigation which Kerschensteiner carried out on some 50,000 Munich school children to discover those who had marked artistic ability. The children were asked "to make freehand drawings of specified objects, both from memory and from nature." In this way were discovered some children, in most cases the children of poor parents, who showed remarkable talent, that had in the majority of cases not been properly appraised by the school. Kerschensteiner saw to it that these children were assigned to art schools or arts and crafts schools where they would have the opportunity to develop these latent powers. "But," observes Dr. Stern, "what

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would have become of these children had not Kerschensteiner chanced to make his experiment? And how much similar talent may smoulder unrecognized in other places where no one thinks of making such tests?"

Stern protests against the practice of prematurely developing children who show marks of talent. These "child prodigy monstrosities" are "often prematurely developed gems of human talent," a sacrifice to the "avarice and passion for fame of deluded parents." "Quiet, harmonious, general development," should be the lot of all children.

J. Petzoldt, in a pamphlet entitled Sonderschulen für hervorragend Befähigte,[6] advocated the establishment of special schools for the exceptionally gifted. He also, according to Stern, suggests that in a large city like Berlin, the twenty most gifted pupils from Quinta (the second-year class in the Gymnasium) (age ten to eleven years), should be sought each year and placed in a special class. "If," says Stern, "suitable teachers are found for such classes and schools, and if they are not made too large, their achievement may be quite extraordinary."

Groszmann[7] classifies exceptionally gifted children as pathological and non-pathological. The latter type may, as a rule, he says, be permitted to progress in school at their own rate, but there are special times, e. g., certain growth periods, such as puberty, when certain nervous tensions may develop, so that the physical health of such pupils needs careful watching. Under the pathologically gifted, Groszmann includes "the genius, the Wunderkind, and the idiot-savant." A real genius is a *Wunderkind* grown up. Leonardo

[6] Teubner, Leipsic, 1905.

[7] See article The Exceptionally Bright Child, Proceedings, Groszmann School. 10th Anniversary, pp. 103-112.

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Da Vinci was a genius of the general type; Mozart of the particular type. Mozart was clearly a pathological genius. Dr. Groszmann thinks that the following remark of young William James Sidis, the eleven-year-old prodigy who is said to lecture to Harvard professors on the fourth dimension, indicates that he is warped somewhat in his mental make-up. "He remarked one day: 'I wonder whether school children in future generations will celebrate this as a holiday because it was the day on which I began the study of the physical sciences'"(!)

Barr[8] intimates that "backwardness and precocity in early childhood are indicative of an abnormal ego."

Dr. G. E. Shuttleworth would appear not to favor the attempt to develop the gifted, for he thinks that a marked departure from the normal in one generation in the ascending direction is but too apt to be compensated for by a corresponding deviation downward in the next, or at any rate, in succeeding generations. Nature dearly loves an average.

Galton[9] thinks that the real genius is bound to rise in spite of all obstacles. He says that the best care that a master can take of a genius is to leave him alone.

Hirsch[10] and Baldwin[11] both state that the influence of education upon genius may be important. Says Baldwin, "Many a genius owes the redemption of his intellectual gifts to legitimate social uses, to the victory gained by a teacher and the discipline learned through obedience. And thus it is, also, that so many who in early life give promise of great distinction fail to achieve it. They run off after a phantom, and society pronounces them mad."

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[8] Mental Defectives, p. 125.
[9] Genius and Heredity, p. 34.
[10] Genius and Degeneration, p. 107.
[11] Social and Ethical Interpretations, p. 162.

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Provisions for Gifted Pupils in Germany, France, and England

The Realschule and the Gymnasium, which the German boy enters at nine years of age and in which an annual tuition fee of about $25 is charged; the Lycee, which takes the French boy at ten or eleven and in which he lives, the annual charge being from $80 to $200; the great English boarding schools, which also receive their pupils at about ten and charge for tuition and board about $1,000 a year, are founded on the principle that a certain proportion of a nation's youth needs special educational advantages. These schools provide an opportunity, especially in Germany, for pupils with special gifts to make an earlier differentiation in their educational choices than is possible in the more democratic American schools. This doubtless leads to more scholarly foundations, and to a more efficient training in preparation for certain lines of professional work; this is especially true in the learning of languages. A boy of ten stands the monotony of the drill incident thereto much better and masters the difficulties of pronunciation much easier than does the boy of fourteen, the age at which the average American boy begins such work in the high school.

The German Volksschule has been said by some to lead into a blind alley, but provision is being made in some of these schools, notably those of Charlottenburg and Mannheim, for giving the abler pupils an opportunity to get an education commensurate with their powers. Ziegler[12] puts much emphasis on the right of the child to become something better than the father and different from him. He also says that the upper ranks of society need the new life and fresh blood from the lower social ranks to keep them from

[12] See his Allegemeine Pädagogik, Teubner, Berlin, 1905, p. 13.

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degenerating. On the other hand, Ziegler thinks that the schools should be so administered that the rank of the father should not be the means of gaining for the son a cultural or professional education when the abilities of the latter have marked him for an education in some trade. He says: "To advise that the son of Mr. Uppermost or Mr. President of the Government Board become a skillful watchmaker or cabinetmaker would (by the father) be regarded as a downright insult, as it was when I advised a father to allow his son to become a gardener." Yet the good of society demands that this be done in order to avoid producing a "cultured proletariat."

Provision for the Gifted Pupils Under the Mannheim System

For many years the pupils of the Volksschule in Mannheim[13] have had the option of receiving French instruction three afternoons a week after regular school hours from 4.15 to 5.15 o'clock. There were certain objections to this plan; the chief one was the fatigued condition of the children after the long school day. This led the school authorities to do away with French instruction out of school hours and to arrange for special divisions in the upper grades of the free Volksschule, for such pupils as had shown themselves fitted for the extra study by their industry and the quality of their work, especially in language, and whose parents desired them to take up the extra language. Those pupils were chiefly considered who intended to go into commercial work and would later attend the commercial continuation school where instruction in French is given.

The basal idea of the Mannheim system is the "adaptation of the means of education to the educa-

[13] See Mannheim Jahresbericht der Städitschen Schulen 1908-9, pp. 21-22.

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bility of the individual pupils." This new arrangement for meeting the needs of the more gifted pupils is in line with this idea.

The plan went into effect in the spring of 1909 and is carried out according to the following regulations:

1. The curriculum of the classes in a foreign language of the Volksschule is, including the number of hours per week, exactly the same as that for grades VI-VIII of the Bürgerschule.

2. Pupils composing these classes are chosen from the VI, VII and VIII grades of the *Volksschulen* of the entire city, including the suburbs, and receive their instruction in school houses centrally located in the Altstadt.

3. A one-year language course with four hours of instruction weekly, given out of school time (after four o'clock in the afternoon) must be taken by all fifth-grade pupils who wish to enter upon the work of the regular foreign language classes. These preliminary courses are given at the regular schools, the pupils taking such courses being members of the regular classes.

4. Such pupils of the fourth grade as have been regularly promoted and have received good reports throughout may be assigned to this preliminary course at the close of the fourth year.

5. At the close of this one-year preliminary course such pupils as have made good progress in French and are also above criticism in the other subjects studied, in the matter of attainment, industry, and conduct, are admitted to the regular foreign language classes.

6. Pupils whose work in the foreign language classes does not come up to the standard are sent back to the regular classes.

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Schools for Gifted Pupils in Baltimore, Maryland

Pupils who have done superior work in the sixth grade are permitted (with the sanction of their parents) to pursue additional subjects of high school grade while engaged upon the regular work of the seventh and eighth grades.

The studies generally taken are Advanced English, German, and Latin; in a few cases pupils have been permitted to take some of the first-year Mathematics.

Pupils selected for this work attend a school so located that enough pupils may be brought together to make it feasible to carry on departmental instruction. One such school was started in Baltimore in 1902 with 173 seventh- and eighth-grade pupils. There were in March, 1910, four such schools in Baltimore, enrolling 571 pupils of the two upper grades. Selected pupils are allowed to remain in these schools for an extra year, thus being able to complete their high school work in two years. The great majority of pupils from these classes graduate from the high school in three years, their work in the preparatory classes saving them a year in their high school course.

Supt. Van Sickle writes thus of the practical working of the plan:

"By June, 1910, 236 (preparatory pupils) in all will have graduated. Of these, 41 were in the high school proper but two years; 120 were in high school three years and 75 four years. While these 75 pupils who, in the early days of the plan, spent four years in the high school did not save any time, they enjoyed marked advantages. They earned 13,050 credits or an average of 174 each; whereas the number required for graduation was only 150." The high school records of these selected pupils, both as to honors taken and as to ability to cover the course in less than the required

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time, show that the preparatory work has been of value to them.

"The fact," says Van Sickle,[14] "that teaching can not be economically provided for less than three classes makes it necessary to organize the preparatory classes in selected centers."

Obstacles to the plan:

Some parents do not understand it.

Some teachers are not in sympathy with it because it takes away their able pupils.

Some pupils are reluctant to go to a strange school.

Owing to these reasons only about a third of the pupils selected as eligible for the preparatory school actually go.

Plans similar to that in Baltimore are in use in Boston at the Latin School; in Providence, R. I., at the Hope High School; at Worcester, Massachusetts; at Portsmouth, New Hampshire; at Richmond, La Porte, Crawfordsville, Goshen, Madison, Indianapolis, Indiana; at Joliet and Aurora, Illinois; at East Saginaw, Iron Mountain, Kalamazoo, and Grand Rapids, Michigan; at York and Lincoln, Nebraska; at Lead, South Dakota; at McAlister, Oklahoma; at New Orleans, Louisiana; at Lake George and Warrensburg, New York, and Harrisburg, Pennsylvania.

These plans[15] practically carry out what is known as the "six and six plan"; six years of elementary school work and six years of high school work.

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[14] Gifted Children in the Public Schools, The Elementary School Teacher. April, 1910, pp. 357-366.

[15] See article on Pre-academic School, in Report of the Committee on School Organisation to New York City Teachers' Association, New York, 1910.

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Chapter Eleven

TRAINING OR DISCIPLINARY SCHOOLS

In East Orange, New Jersey, a room is set apart in a central school for the "uneasy boys" from the third to the seventh grades inclusive. Superintendent Davey writes, "We have so few hard cases that it has not seemed proper to call this an incorrigible or parental room. Out of 1200 boys in these grades we generally have six or eight in this room, where they remain until their conduct has been entirely satisfactory for four weeks."

In Elizabeth, New Jersey, there is an "ungraded" class with a man in charge to which are sent boys whose conduct is a detriment to the children of the regular classes. This is known as the Parental School. In writing concerning this school, Superintendent R. E. Clements says, "Some of the boys sent to this school are almost beyond control, are profane, indecent, unclean, and altogether unfit to associate with the 'average child.'"

Many of them are to a great extent reformed after a longer or shorter period in the special school, and are sent back to their regular classes, their places being taken by others who may be on the "waiting list." A few seem to be unable to reform and are continued in the parental school from term to term.

The training schools in Providence, R. I., are called "schools for individual work." There are seven such schools in the city.

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The largest disciplinary school[1] in the United States is School No. 120, New York City, of which Miss Olive M. Jones is principal.

DAILY PROGRAM OF A TRAINING CLASS, SCHOOL NO. 82, BALTIMORE, MD.

FORENOON

Time.	Grade II.	Grade III.	Grade IV.	Class.
9.00–9.15				Opening Exercises, Memory Gems, Music.
9.15–9.30				Literature, History, Geography, Nature or Physiology.
9.30–9.50	Flash Spelling. Prep. Reading.	Study Spelling. Silent Reading.	Study Spelling. Study Geog. or History.	
9.50–10.10	Study Spelling. Silent Reading.	Reading, (with teacher).	Write tables. Study tables.	
10.10–10.30	Number, (seat work).	Write tables. Study tables.	Present New Topic in Arithmetic.	
10.30–10.45				Rapid Calculations. Written Spelling.
10.45–11.00				Recess.
11.00–11.10				Phonetics.
11.10–11.30	Language, (with teacher).	Seat Arithmetic.	Seat Arithmetic.	
11.30–12.00				Chair Caning, Basketry, Raffia Work, Bent Iron Work, or Cardboard Construction.

[1] See article describing organization of this school in detail. Proceedings N. E. A., 1908. pp. 361–365.

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DAILY PROGRAM OF TRAINING CLASS, SCHOOL NO. 82, BALTIMORE, MD.

AFTERNOON

Time	Grade II.	Grade III.	Grade IV.	Class.
1.30–1.45				Penmanship.
1.45–2.00	Seat Arithmetic.	Oral Language.	Oral Language.	
2.00–2.20	Reading. (with teacher).	Written Language.	Written Language.	
2.20–2.30				Physical Culture. Recess.
2.30–3.30				Wood-work.

Comment by teacher:

"This program is subject to frequent changes, as unforseen conditions arise. A few words of explanation will, perhaps, give the reader a better idea of the method used in planning the various lessons.

"The period from 9.15 to 9.30 is devoted to Literature, Nature, History, Geography, or Physiology. These subjects are carefully planned, as every phase of the English for each grade, phonetics, spelling, reading, language, dramatization, and memory gem, grows out of the morning lesson. One subject extends over a period of a week, each day's lesson being but a step in the development of the whole. The music and some form of construction, when practicable, are also correlations of the same subject.

"Shortly after a boy becomes a member of my class, I have an interview with one or both parents, either at school or at the home. I then learn whether the child will eventually return to a grade, or will obtain employment directly after leaving the ungraded class. The lessons for each child are planned accordingly. In the former case, the child is prepared for a higher grade; in the latter, his studies tend to fit him for the business world, and for the examination required in order to obtain an employment permit. With every child, individual instruction is given to overcome any weakness which may exist."

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Chapter Twelve

DEPARTMENTAL TEACHING

There are many educators, Dr. C. W. Eliot among others, who believe the individual good of the pupils is best promoted by organizing the teaching of certain grades of the elementary school on the departmental plan similar to the organization in the high school. By this plan, instead of having one teacher teach all the subjects of a certain grade, the teachers of several grades or classes apportion the work so that each teacher makes a specialty of teaching some one principal subject. Thus, the writer has in mind a school in which the teaching of the four classes composing the seventh and eighth grades is organized according to this plan. The teaching is done by five teachers including the principal, who is the departmental teacher of History. He has no room assigned to his charge. The teacher of English has charge of Grade VIII Class I; the teacher of Mathematics has charge of Grade VIII Class II. The two classes composing Grade VII are looked after by the teacher of Geography and Science and the teacher of Reading, respectively.

The teacher in charge of a class is called the class teacher and as such she makes out the reports, is responsible for the general discipline of the room, and teaches the minor subjects such as Drawing, Penmanship and Spelling.

When departmental work began to be introduced into the elementary schools about fifteen years ago,

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some schools organized the teaching in the four or five upper grades on this plan but now the consensus of opinion seems to be that the best results are obtained when the use of the plan is confined to the two upper grades.

The chief advantages of the plan are these:

1. Each teacher is a specialist.
2. The teacher's daily preparation is better because she has only one or two subjects.
3. More thorough scholarship on the part of the teacher is thus encouraged.
4. Thorough knowledge on the part of the teacher tends to more inspiring teaching.
5. The curriculum is enriched intensively—the teacher knows her subject.
6. The teacher is thus enabled to present what is worth while.
7. It tends to secure better equipment in the way of books, apparatus and other appliances, as each teacher makes a study of what is best adapted to make her work effective.
8. It tends to promote the physical comfort and health of the pupils by having them change from room to room.

The chief disadvantages are these:

1. Teaching special subjects tends to narrow teachers.
2. The teacher teaches subjects and thus forgets the individual, it being much harder to look after the individual need of 150 pupils than of 40.
3. The departmental teachers are inclined to demand too much work of their pupils.
4. It is impossible to arrange departmental programs according to hygienic principles so that the studies will come at a time conducive to the best results.

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5. It tends to poorer discipline; one weak teacher may be responsible for demoralizing the discipline of a series of rooms. Associate City Superintendent Haaren of New York City finds "that many of the difficulties of department instruction are encountered during the first term of the VIIa grades. The pupils of this grade being new to the plan, become confused at having to recite to so many teachers; they also abuse the larger liberty that is given them." Superintendent Haaren[1] thinks also that if "the defects of discipline, of habits of study, or of any of the things that should mark the good students" are corrected at this point, largely by the closer supervision of the principal, they will not be likely to reappear in the higher grades.

Superintendent Haaren also points out, that a "single departmental circuit should not have more than five teachers." Kilpatrick[2] would make six teachers the limit.

Kilpatrick[3] further makes the rather sweeping statement, which is certainly debatable, that the plan of having the teachers go from classroom to classroom to teach their specialties, the "Peripatetic Method" as he calls it, instead of having the classes change rooms is open to serious objection, so serious that "it is questionable whether departmental teaching should be tried at all" where it is necessary to follow this method. Kilpatrick also stresses what he calls the "Common Subject Plan" of departmental teaching. Under this plan each of the department teachers would teach English to his own class and his special subjects to all the classes of the "departmental circuit."

[1] Report of School Division VII in Twelfth Annual Report of the City Supt. of Schools New York City for 1910, p. 281.

[2] See his Report on Departmental Teaching in Report of Committee on School Organization of New York City Teachers' Association, 1910, p. 13.

[3] See his Departmental Teaching, Macmillan, N. Y. 1908, p. 112.

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SPECIMEN PROGRAM.

Teacher.	Common Subject.	Departmental Subject.
A	English	Mathematics
B	English	History—Music
C	English	Geography Science
D	English	Manual Training Drawing

Perry[4] makes the statement that in order to enable "the graduating teachers to correlate and round out the work" of the different teachers in the previous grades "it would seem best to omit the highest grade from the departmental plan."

This idea would, however, not be favored by those who have studied the plan most carefully. The two upper grades are best adapted for carrying out the plan.

[4] The Management of a City School, Macmillan 1908, p. 192.

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Chapter Thirteen

SUMMARY OF THE REPORT OF THE COMMITTEE ON SCHOOL ORGANIZATION TO THE NEW YORK CITY TEACHERS' ASSOCIATION AND THE BROOKLYN TEACHERS' ASSOCIATION

This report gives the result of a study of the popularity of the best known plans of grading and promotion among about 1,000 superintendents, principals and "teachers of teachers" in the different states of this country. A return postal card was sent to 2,000 educators. They were asked two questions in regard to each of thirteen plans of grading and promotion.

1. Have you tried? 2. Do you favor? The following is a brief summary of the answers to the questionnaire.

	Number who favored	Did not favor	Had tried
1. Cambridge Plan. Bright pupils may be transferred to shorter course; slow pupils to longer course.	241	120	75
2. Elizabeth Plan. Opportunities are provided for frequent promotion.	351	98	276
3. Pueblo Plan. *Each individual child progresses as fast as he can and is promoted at any time.	284	155	207
4. Batavia Plan. *Two teachers are employed to teach one large class.	145	259	138

* [Interpretations wrong or partially wrong.]

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		Number who favored	Did not favor	Had tried
5.	Departmental Teaching. Seventh and Eighth Grades taught similarly to the high school method.	479	149	465
6.	Group Teaching. Class is divided into two or more groups for study and recitation.	534	62	539
7.	Pre-academic School. Seventh and eighth years organized as a separate school.	119	269	46
8.	Extension Classes. Short commercial or industrial courses used to supplement elementary course.	238	122	57
9.	Special classes of over-age or foreign born children.	553	43	296
10.	Ungraded Classes. *Classes organized for defectives or incorrigibles.	590	37	276
11.	Promotion by Points. A proposition to advance by subjects and not by grades.	196	187	73
12.	Chicago Plan. Teachers can promote entire class as soon as grade work has been completed.	244	157	111
13.	North Denver Plan. Bright pupils help other pupils.	227	164	169

Summary of Report of Committee

"The individual child has been ignored largely" because our usual plan of school organization following the "line of least resistance" has made it extremely difficult to properly place the individual. Our present system has directly hindered self-initiative, self-mastery, courage of conviction, and individual independence and forcefulness. The child has been led too often to feel that the only thing that really counted was to become mediocre. Such a course always secured promotion and equal rank with the best pupils.

* [Interpretation wrong or partially wrong.]

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"In all of the thousand and more replies received, only one or two challenged the urgent need of protecting the individual pupil through better school organization."[1]

Each of the plans has something of value. Any plan must be more or less modified to suit local conditions.

1. AIM OF SCHOOL ORGANIZATION.—To give each child a chance to work up to the full measure of his capability. A school providing such opportunity presents ideal conditions.

2. MEANS OF PROVIDING THIS OPPORTUNITY.—Flexibility of school organization. The course of study, the program, the equipment, grading, and promotions should all be planned to meet the needs not of the "average child" but of the individual children.

3. CLASSIFICATION AND GRADING.—Attainment should be the basis of classification. A pupil should be rated on the points or units of work he has actually accomplished, irrespective of what other members of the class or school have accomplished.

4. PROMOTION.—Promotions should be made at any time when the individual pupil completes satisfactorily a given portion of the course. He should be given credit for this amount of work and allowed to go on to new work. This is promotion by points rather than by classes. The pupils should be made to see that not change of teacher and classes, but attainment as evidenced by power to attack and solve new problems is the essential element of promotion.

5. STUDY.—School organization should provide time for independent study. Such study time should furnish opportunity for the pupil to make up lost work and to do work that may help him to advance more

[1] N. Y. Rep. p. 3. Van Evrie Kilpatrick. Chairman Com. on Organization.

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rapidly. The study period will be ineffective unless the pupil can be made to see that the work done really counts toward his advancement.

6. COURSE OF STUDY.—The course of study should be written in sections, each covering the work that could be done by the normal child in one or two months. Credit should be given for each unit of work as it is accomplished. It is not possible to modify the course of study by elimination; it must be done by individual election, one pupil electing "language enrichment" another "industrial enrichment."

7. METHODS OF TEACHING.—Interest should be stimulated by the best physical conditions and by keeping the class at work as individuals, giving each child abundant opportunity to express himself.

Concert recitations are "taboo." 1. Instructing the class; 2. giving opportunity for study and reflection; 3. giving opportunity for individual expression and advancement; 4. examining and recording; all four phases are elements of good teaching. The study phase has been too much neglected.

8. RECORDS AND EQUIPMENT.—A pupil's attainments should be properly recorded. (The French *cahier* might be a valuable means of spurring a pupil on to higher attainments. This personal record book goes with the pupil from grade to grade. In it are recorded his successes and failures.)

Each pupil should have his own individual school equipment. In this way responsibility and initiative are developed.

9. SCHOOL SESSIONS.—The all-the-year-round school should prevail. Vacation schools and summer schools for review work, as at St. Louis, are forerunners of the change that is to come. Teachers should teach and pupils should be compelled to attend a minimum number of days during the year.

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10. MASS TEACHING MUST GIVE WAY TO CLASS-INDIVIDUALIZED TEACHING.—Each pupil of the class group must feel free to work ahead up to the full measure of his ability and be encouraged and shown the way to succeed. This is the end of true education: not to pass through the grades, eight, sixteen, or twenty-four, but to pass through a process of self-development so stimulated and fostered that the best good of both the individual and society will result.

The report contains much valuable information in the way of opinions from different educators throughout the country.

The monographs on the various plans are, however, too short to give any real grasp of the working of the plans and some of the writers, notably the writer of the monograph on the Batavia plan, show lack of grasp of the fundamental principles of the plan described as well as marked hostility to it.

A vote such as was taken can mean very little in regard to the success or real merits of a particular plan. The writer happens to know that in all New England the Batavia System has been given a fair trial in but three school systems. The heads of these school systems and the great majority of their teachers favor the plan. He also happens to know that the Group Method referred to in the questionnaire is entirely different from what is generally called the Group System in most sections of the country, which is nothing more than the St. Louis or Elizabeth Plan. In the questionnaire many voted for or against one thing and were recorded as voting for or against another.

The report will do much good if it will stimulate school men and women to thoroughly study all plans of grading in a scientific spirit with the idea of knowing the strong points and the weak points of each one. No universal plan of grading will ever be evolved, but there

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doubtless are several plans that will accomplish good results when they are intelligently administered in the interests of the individual children.

We need to study in all cases the individual abilities of the pupils.

Dr. W. Franklin Jones[2] sums up the matter very well in the following sentence which closes his valuable Study of Grading and Promotion. "Classification and promotion should be made on the basis of personal acquaintance with the abilities and needs of the specific subjects, rather than on the basis of the formal examination covering any or all subjects." The provision for bringing about this personal knowledge of each pupil will do much to evolve a rational plan of grading and promotion. We must know the child before we can meet his needs.

[2] See Psychological Clinic, June 1911, p. 117.

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Chapter Fourteen

MANU-MENTAL SCHOOLS

No attempt will be made to treat here the subject of trade schools and classes preparatory to such schools. This phase of the subject has been extensively treated by many different authors. Many cities have, however, within the last two years started schools for the average and retarded pupils, boys and girls that are stranded in the lower and middle grades and will soon reach the limit of compulsory school attendance and will then leave school with the merest elements of an intellectual education. The school as ordinarily organized has made no provision for the manu-mental training of these mentally slow, sometimes only bookishly slow, boys and girls.

These boys and girls need the manu-mental work that has been so potent in developing the race, work that is closely allied to the everyday struggle for making a living. Such work may be the foundation upon which later a trade training is built. If so, well and good, but it must be recognized that many of these slow boys and girls will never learn a trade; they will be ordinary day laborers in the different industries and commercial enterprises, yet they need this practical training that the manu-mental school can give, to make them more skillful ordinary workers, and what is equally important to make them, both boys and girls, better prospective home-makers. The man and the woman who have been trained to use their hands in the many ways that they can be so trained in these

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special schools just coming into being, will make better, more provident and happier citizens, who know how, because of this practical training, to take care of themselves and their homes as well as to render more efficient industrial or commercial service.

Differentiated courses for such pupils in the upper grades have been worked out in some school systems, notably that of New Britain, Connecticut, and of Fitchburg, Massachusetts. Superintendent S. H. Holmes, of New Britain in his report for 1911, writes as follows of the differentiated courses in the Grammar School:

"This plan has now been on trial for a full year. Up to September, 1910, the Grammar School had offered to its pupils only one course of study calculated to prepare for entrance to the High School, whether they were planning to enter the High School or not.

"The work of the school as arranged for the past year and at the present time consists of four different and differing courses, each one of which may lead to the High School if the pupil maintains creditable standing in his work."

These courses are as follows:

COURSE A.—The General Course—designed to prepare particularly for the English and classical courses of the High School.

COURSE B.—The Household Arts Course for Girls—designed to prepare for (a) The Domestic Science Course of the High School: (b) The Trade School for Girls, and (c) the duties of home making and housekeeping.

COURSE C.—The Practical Arts Course for Boys—designed to prepare for (a) The Mechanic Arts Course of the High School: (b) The Trade School for Boys.

COURSE D.—Business and English Course for Boys and Girls—designed to prepare for (a) The Com-

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mercial Course of the High School; (b) The Business College: (c) also intended for those pupils who go directly from the Grammar school into positions in stores and offices.

"The choices in September, 1910, were as follows:

GRADE VIII.		
Course A—Boys	83	
Girls	90	173
Course B—Girls	22	22
Course C—Boys	37	37
Course D—Boys	22	
Girls	25	47
Total number in grade		279
GRADE IX.		
Course A—Boys	93	
Girls	84	177
Course B—Girls	10	10
Course C—Boys	12	12
Course D—Boys	4	
Girls	11	15
Total number in grade		214

"At the close of the year, allowing for such withdrawals from the school as usually occur and for such changes in choice of courses as were permitted where reasons seemed adequate, the numbers in the courses stood as follows:

GRADE VIII.	
Course A—Boys and Girls	179
Course B—Girls	23
Course C—Boys	30
Course D—Boys and Girls	42
Total number in grade	274

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GRADE IX.

Course A—Boys and Girls	180
Course B—Girls	9
Course C—Boys	10
Course D—Boys and Girls	18
Total number in grade	217

"One of the most noticeable and satisfactory results of the new plan of organization is its effect in preventing the large percentage of loss which has formerly been experienced in the grammar grades.

"Any reasonable plan that serves to hold the pupils in the school until they have finished the year's work is worth all that it calls for in added difficulty of organization or cost of administration.

"Some of the advantages which may reasonably be expected from such a plan of differentiation of courses may be briefly stated as follows:

1. Prevention of loss in membership.
2. A better quality of work, because individual abilities, tastes, interests and purposes are considered.
3. Closer connection with Trade School and High School courses and better preparation for life work for those who leave school at the end of the Grammar School course.

"The choices of courses for the school year opening September, 1911, have resulted as follows:

GRADE VII. (Formerly Grade VIII.)

Course A—Boys	94	
Girls	100	194
Course B—Girls		35
Course C—Boys		44
Course C—Boys	31	
Girls	34	65
Total number in grade		338

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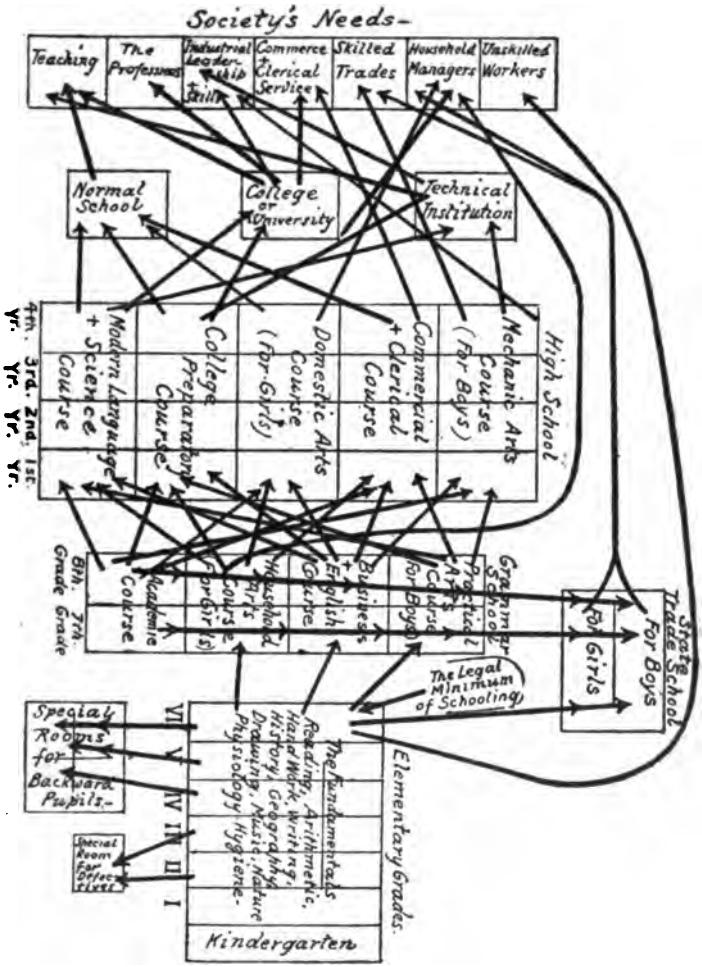

DIAGRAM SHOWING THE ORGANIZATION OF THE SECONDARY AND ELEMENTARY SCHOOL SYSTEM OF NEW BRITAIN, CONNECTICUT

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GRADE VIII. (Formerly Grade IX.)		
Course A—Boys	79	
Girls	107	186
Course B—Girls		16
Course C—Boys		21
Course B—Boys	18	
Girls	22	40
Total number in grade		263

Practical Arts School of Fitchburg, Massachusetts

The Practical Arts School of Fitchburg, Massachusetts, offers the following four courses for the pupils of the seventh and eighth grades.[1]

Courses of Study

COMMERCIAL COURSE, 30 hours per week.

12½ hours to literature, composition, spelling, penmanship, mathematics, geography, history and science.

7½ hours to physical training, social dancing, music, general exercises and recesses.

10 hours to typewriting, shorthand, bookkeeping, and business arithmetic and related design.

PRACTICAL ARTS COURSE, 30 hours per week.

12½ hours to literature, composition, spelling, penmanship, mathematics, geography, history and science.

7½ hours to physical training, social dancing, music, general exercises and recesses.

10 hours to drawing, designing, printing, making and repairing.

HOUSEHOLD ARTS COURSE, 30 hours per week.

[1] This description of school and courses is taken from the report of Mr. Charles S. Alexander, Director of the Practical Arts School.

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12½ hours to literature, composition, spelling, penmanship, mathematics, geography, history and science.

7½ hours to physical training, social dancing, music, general exercises and recesses.

10 hours to household arts.

LITERARY COURSE, 30 hours per week.

12½ hours to literature, composition, spelling, penmanship, mathematics, geography, history and science.

7½ hours to physical training, social dancing, music, general exercises and recesses.

5 hours to a modern language.

5 hours to drawing, designing, printing, making and repairing. (Household Arts for girls.)

Home study is also required —two hours a week in grade seven and five hours a week in grade eight.

"This home study, it is expected, will gradually develop the habit of doing part of the school preparation outside of school hours and make the pupil better able to meet the high school requirements of fifteen hours home study per week. It may seem to some that with thirty hours of school sessions per week there should be no required home work. If there be any holding such an opinion they should not forget the amount of time in each course given to manual work, and the total hours of study and recitation required of first year high school pupils. One of the causes of failure in taking up high school work is the jump from the ordinary eighth grade requirement of twenty-five hours per week to the high school requirement of forty hours per week. As arranged at the Practical Arts School the transition is easier.

"Seventh Grade—32 hours per week including 5 to 10 hours manual work.

"Eighth Grade—35 hours per week, including 5 to 10 hours manual work.

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High School—40 hours per week.

"It will be necessary hereafter to set a limit to the number of pupils who can be admitted to each of the courses. Next September (1912) the numbers which the school can accommodate will be as follows:

"Literary, 64; Commercial, 64; Practical Arts, 64; Household Arts, 64; a total of 256 in grades seven and eight.

"Pupils attending Day Street School and the Edgerly School should be given the first opportunity; after which the courses, until the number limit is reached, should be open to all pupils in the city who have completed the sixth grade work. Such pupils should be received in order of application, which should be made through the office of the superintendent of schools.

"The work of the school has been broadened and strengthened by the purchase by the state of nearly ten acres of land which will provide ample opportunity for agricultural work and for athletics. Beginning next spring it is planned to give the boys attending the school an opportunity to earn something by working Saturdays and vacations upon the land.

"The school, it is hoped, is meeting better each year the purposes for which it was established: to make the book work of the elementary school real and therefore significant; to impress the pupil consciously and unconsciously with the truth that the world is a world of work even more largely than a world of books; and to teach him that hard manual labor is dignified and worthy and one of the greatest of men's blessings—the basis of sound health, cheerful spirits and good morals. Incidentally, the literary work is improved as its use and value is understood. The pupil is also brought into contact with several trades and is thus enabled to make an intelligent choice of a vocation, when such a choice is to be made.

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"The growing appreciation of the aims and the work of the school not only in Fitchburg but in other parts of the country is gratifying to those who have given so freely of their thought and time to its development. Peculiarly pleasing was the declaration of the Chairman of the Canadian Commission on Industrial Education that some such course as the practical arts course should precede and be a preparation for trade or vocation courses—and of other members of the Commission that the school was one of the most suggestive, interesting and helpful contributions to the solution of the present educational problem that they had found in their sixteen months of travel in Europe and the United States. They found but one similar school, an elementary Practical Arts School, recently opened in Leeds, England."

The Cleveland Elementary Industrial School

The Elementary Industrial School of Cleveland, Ohio, may be taken as a type of the many manu-mental schools that are being organized in different parts of the United States. It is really a school for hand-minded children. The school was opened in September, 1909. It was organized especially for those pupils who were not under thirteen years of age and who were stranded in the sixth grade and were not less than two years older than the normal age for the grade. Principals of the elementary schools were asked to recommend for the school such boys and girls as in their judgment would be most benefited by the work of such a course. The consent of parents was also obtained by showing them that their children would make greater progress and be more benefited in the new school than in the regular schools. The school is more than a trade or vocation school. "Industrial considerations

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were, indeed, to lead and the practical tendencies of the pupils were to be appealed to and emphasized both in hand-work and in academic work. They were to revel, as it were, in practical efficiency. Yet, at the same time, no effort was to be spared to touch and stir the deeper springs of personality, or manly and womanly qualities in the pupils, to lead them to an appreciation of the social and esthetic value of work, to spiritualize their growing efficiency with elements of good will and joy."

Course of Study and Time Schedule

The course covers two school years. The school session is from 8.30 A. M. to 3.15 P. M. and is divided into nine periods, one of which is a lunch period. There are thus forty periods each week which may be devoted to instruction and practice. One half of this time is devoted to practical instruction in English, mathematics, history, geography, and hygiene; the other half is devoted to domestic economy, industrial work and gymnasium practice. The school is equipped with shower baths and a swimming pool. There is also an assembly hall in which general exercises are held. The sexes are segregated, thus enabling the teachers to shape the work in each subject to the particular needs of each sex.

The Course for Girls

The industrial and economic course for girls includes cooking, laundering and general household management, together with work in sewing, garment-making, millinery, drawing and design and applied art. They are given training in the care of the sickroom and in the elementary principles of nursing. They learn the essential features of good plumbing, the care of traps, of the sink, the refrigerator and the bath-room.

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They are taught a simple system of household accounting and are given much practical information concerning the "cost of food, fuel, service, rents and typical family budgets." The girls make visits of inspection to the markets, to house-furnishing stores, to shops and factories, gaining in this way valuable first-hand knowledge. A room is placed at the disposal of the girls which serves consecutively as living-room, dining-room, bed-room, and sick-room. The girls and boys co-operate in furnishing this room; the regular care and detailed management are given over to the girls.

The Course for Boys

The boys are taught in the industrial course, free-hand and mechanical drawing, "woodwork, pattern making, design and craft." The aim throughout is to correlate the school work as much as possible with the corresponding work in the industries. Along with the bench work are given problems calling for a systematic use of tools and a knowledge of the main principles of construction.

"Commercial problems are offered in appliances for the school gardens, in the making of bulletin boards, window boxes, picture frames for the schoolrooms and many other articles. The boys receive some practical knowledge of house furnishing in helping the girls to furnish the model room; they also make furniture for their own needs at home. The main principles of construction are solved on work in miniature." Metal fittings for woodwork, paints, stains and finishes are studied and applied. The boys make visits of inspection to shops, factories, to drafting rooms and to the work-shops of other lines of industry. "Stress is placed upon business methods, time-cards, expense and checking systems, measuring, estimating cost, bills, letters, materials, and contracts."

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The Effect of the Work upon the Pupils

Dr. Hailman,[2] to whose report on the Cleveland Elementary Industrial School I am indebted for most of the facts here presented, states that the new work is a source of encouragement to the pupils; the pupils, under the sensible discipline and kindly and intelligent guidance of sympathetic teachers, soon find that they have abilities which they little knew before. They also see new meanings in the academic work, and take it up with new zest. "As they have gained in confidence, they have gained in poise." They have learned to respect themselves and in this way have come to have more respect for the work of the school. They have increased their power of initiative and their sense of responsibility.

"Significant," writes Dr. Hailman, "is the gain of the pupils in their academic work. Indifference yielded to intelligent interest; discouragement and apathy in the presence of difficulty, to determined persistence and the fervor of achievement. Parents who came to visit the school expressed themselves as much pleased, praised the growing interest and ability of their children in academic, as well as economic, subjects, seemed to enjoy the new sensation of pride in the work and progress of their children."

A gain in regularity of attendance of the pupils was also noted, although many of the pupils were compelled to ride or walk distances of several miles to get to school each day.

Furthermore, after two years of existence the prejudice against the school on the part of some, due to the thought that membership in the school implied dullness, has been so far overcome that many so-called

[2] See Monograph, "Elementary Industrial School," 1910, published by Cleveland Board of Education.

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bright children have filed applications for admission. A still more convincing proof of the worth of the school is found in the fact that a number of pupils who had lost interest in school work before their admission to the Industrial School, are now anxious to prepare themselves to enter the Technical High School.

Course of Study

First Year, Boys

Drawing

Simple Working Drawing. Freehand sketching—Representation of simple objects, graphically and in view-drawing.

Working Drawings—Simple objects illustrating necessity for and arrangement of views. Conventions of lines, dimensions, sections, etc. Drawing to scale. Application in working drawings for the shop. Subject related closely to industry by using much illustration material, drawings, blue-prints, etc., and by visits to shops and drafting rooms.

Practical Outlook. Work as mechanical or architectual draftsman.

Simple Lettering. Plain letters and figures used in mechanical and architectural drawing.

Application in connection with working drawings and sketches in shops.

Composition In Lettering. Types of letters used in reference to artistic effect in spacing and in relation to margins and space to be filled. Tail pieces, line finishings, initials, illuminating, monograms.

Application in titles, title pages, book covers, bulletins, advertisements, business cards, etc.

Illustrative material, visits to printing office, etc.

Practical Outlook. Sign, bulletin and placard painting as a trade.

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DESIGN. For the development of the sense of outline, form and proportion.

Application in wood and metal work.

SIMPLE METAL WORK. Design applied in simple objects in copper, brass and other soft metals, particularly fittings for wood workbox corners, hinges, escutcheons, catches, drawer and door bolts, plates, surface decorations, etc.

WOODWORK

PRELIMINARY PROBLEMS. Problems presenting systematic use of tools and general principles of construction, involved in simple projects of use and beauty, applying art principles of form and color, and correlating with metal work, mechanical and free-hand drawing.

COMMERCIAL PROBLEMS. Problems of commercial value, such as appliances for school gardens, window boxes, bulletin boards and frames for schoolrooms, etc., etc., otherwise made at the repair shop.

FINISHES. Stains, paints and finishes studied and applied in various wood-working projects.

BUSINESS METHODS. Time card, expense and checking system, measuring, estimating, costs, bills, letters, materials, contracts, etc., etc., correlating with English, Geography-History and Mathematics, in both first and second years.

First Year, Girls

HOUSEHOLD ARTS

AIM. The training of pupils in the subjects which pertain to life in the home.

COOKERY. Cooking of types of vegetables, cereals, the various cuts of meat, flour mixtures, instruction in the principles underlying the work, preparation and serving of meals, practice in writing menus, care of the kitchen and dining-room.

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SANITATION. Plumbing, cleaning of traps, care of the sink, refrigerator and bath-room.

LAUNDRY. Washing of dish towels and table linen.

SEWING. Care and use of machines. Making of uniform for household science, sewing bag, mending, hemming table linen, corset cover, shirt-waist suit.

ART. Designs for table linen, wall paper, rugs, draperies, dishes, beauty in form of dishes and cooking utensils and fitness for use, lettering, title pages of notebooks, illustrations for notebooks, suitable pictures for the home.

Lettering for making articles made in sewing, textile designs, fitness of articles for their use, suitable designs for embroidery, pictures of beautiful costumes.

HOUSEHOLD ACCOUNTS. Cost of food in the lessons. Cost of meals which are prepared. Cost *per capita* per day. Cost of furnishings, textiles, clothing.

MUSEUM. Textiles and materials from which they are made, pictures of looms, spinning wheels.

CLASS VISITS. Markets, stores, factories and shops.

CORRELATION. All of the work is correlated with English, Geography-History and Mathematics, in both first and second years.

Second Year, Boys

FIRST TERM

Work as outlined for the first year continued.

SECOND AND THIRD TERMS

Full time for industrial work (about eighteen three-quarter hour periods each week) may be devoted to specialization in one of the following subjects:

Mechanical Drawing.
Printing.
Cabinet Making.
Pattern Making.
Building Construction.

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CLASS VISITS. After class talks and discussions, visits to drafting rooms, buildings in the process of construction and finish, to cabinet shops, paint manufactories, printing offices, pattern shops, etc.

Second Year, Girls

HOUSEHOLD ARTS

COOKERY. Preservation of food; canning of peaches, pears, tomatoes, jelly, sterilization. Preparation of such combinations of food as could be used for a meal.

Soups, bread, salads, simple desserts, preparation and serving of meals, infant feeding, invalid cookery. Practice in writing menus.

SANITATION. Review of first year work.

LAUNDRY. Hard and soft water, action of alkalies, making of soap, preparation of starch, removal of stains, washing and ironing of various textiles.

HOME NURSING. Making a bed, care of sick room, simple treatment of cuts and burns.

SEWING. Making of drawers, nightgowns, dress of wash materials. Emphasis is placed upon increase in speed.

ART. Household decoration and furnishing. Colors and materials suitable for the various rooms and uses in a home. Study of the principles underlying artistic construction in dress. Study of historic examples of dress.

MECHANICAL DRAWING. Working drawing for anything needed for the kitchen such as table, drain board for sink, shelf or drawer for pantry, accurate measurements for windows for window fixtures, drawing to scale of windows.

HOUSEHOLD ACCOUNTS. Cost of food, fuel, service, rent. Typical family budgets.

CLASS VISITS. Markets and house furnishing shops.

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ECONOMIC VALUE. The use which the woman makes of money in the home is of equal importance to the acquiring of the money. "It is the present duty of the economist to magnify the office of the wealth expender, to accompany her to the very threshold of the home, that he may point out its woeful defects, its emptiness, caused not so much by lack of income, as by lack of knowledge of how to spend wisely."

What the Pupils think of the School

Dr. Hailman asked a second-year class of twenty-seven girls and a class of thirty-seven boys to write him letters expressing freely their opinions as to the benefit they had derived from the work at the Industrial School.

The following extracts from the letters received will indicate the spirit of their answers with reference to this point:

Report from Girls

"Arithmetic and geography I never could understand in grade school, but since I have come here I am interested." "I like the school because the teachers teach the studies we most need, especially the boys and girls who want to earn their own living." "I find that I have improved in the subject which seemed to halt my progress in school. This subject was arithmetic, and I am grateful to the teacher and the school for their help." "The school work is told so interestingly that we can use it out of school." "I like the school because it has helped me to get good marks in school and be good to home folks." "The school has taught me to be more useful in the home and to be neater in my work than I used to be." "I hope this school will help me more every day, so that I may be more useful when I grow older." "Here we learn how to sew and

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cook, and we learn arithmetic and geography that we will use out in life." "Our arithmetic and other studies are given us in a way that will help us when we are grown up." "This school has helped me to wish to be helpful to others, and it has taught me work that, when I am home, I can help my mother." "The teachers here speak to us like grown-up sisters. They tell us what we should do in a way that makes us feel at home." "I enjoy coming here, because the lessons are more business-like." "Since I came here I have learned more than in the seven years at grade school, especially in arithmetic." "I like this school because I never could have learned anything and I am more use in the world. I learned how to be a lady." "Out in the grade school I felt as if I just wanted to stop, but here the work is so interesting that I don't like to leave it." "The school has helped me in what I needed most, obedience and behavior."

Cooking and sewing were mentioned as favorite subjects by twenty-one; gymnasium practice and swimming by eight; geography by six; arithmetic by ten; English by nine; drawing by five. Six of the girls are looking forward with eager interest to the millinery of the second-year course.

Reports from Boys

Letters similarly obtained from a class of thirty-seven boys, yield the following more or less significant extracts:

"The lessons were so interesting that I felt as if I was taking a new hold in life." "I am more business-like than I was before, and can do my work much better." "Mechanical drawing I like best, because you have to be neat and accurate." "It has taught me what an education means in life." "We do not sit in one room all the time and have the privilege of

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changing classes." "The school has made me be more of a man; it has made me have more self-respect and responsibility." "I like the shop-work because it gives me something to do with my hands." "The six hours in this school pass quicker than the five hours in the other school." "It makes me more respectful and the work is more of the kind I like." "If the industrial school continues to be used to make men of boys, it will soon be of great value." "In making things at home I have more confidence in myself." "It has learned me to have better manners and to do better arithmetic and lots of other things." "The work I like best is arithmetic, because I did not know any at all before I came here." "I learned to be more obedient and my parents say: 'You seem to be learning more now than you used to learn.'" "The school has made a man of me." "The school has helped me to think and to get my work more easily." "Shop-work and drawing I like best, because they teach me to be accurate." "I like it because it is the line of work I will follow." (Several boys express this thought; others see in the work good preparation for the Technical High School, and one of these for subsequent attendance upon a course in scientific farming at the O. S. U.) "It has not only helped me in learning a trade but to get along better in my other studies." "It has taught me to like school. I like all the work we have."

Among favorite subjects, mechanical drawing is mentioned by twenty-six, woodwork by eighteen of the boys. Seven boys praise the fact that they do not have to sit in one room all day. One boy criticizes "the poor location" of the school, but is otherwise much pleased.

It is clear from these extracts that the work is taking the right hold on the lives of the boys and girls

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and that they see in school work, not something that is divorced from life but something that has "every earmark of actual life."

The testimony of the teachers of the school corroborates the statements of the boys and girls. These teachers think that the industrial and economic work of the school was responsible for the change in the pupils' attitudes to school and toward life in general. The pupils were led to see the value of academic work through its application to the economic and industrial work and to appreciate the need of a mastery in both lines of endeavor.

The teachers also sought to get hold of the pupils by taking a genuine interest in them, and by teaching them to see that the "school liked them, believed in them and in their ability." This individual oversight and interest was made easier by the fact that the classes had much smaller memberships than those of the ordinary school.

Boston, Massachusetts; Rochester and Albany, New York; Indianapolis, Indiana, and St. Paul, Minnesota, have organized schools and courses somewhat similar to those just described.

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Chapter Fifteen

CLASSES FOR STAMMERERS AND STUTTERERS

In nearly every school there are children suffering from speech defects, and in the great majority of cases such defects are curable.

Conradi estimates that in 1904 there were about half a million children suffering from such defects in the public schools of the United States.

In order to make this number, children suffering from minor defects in enunciation would probably have to be counted. It is also likely that within the last fifteen or twenty years phonetic reading and phonetic drills in the schools have tended to correct to a considerable degree faulty habits of speech.

Rowe[1] estimates that about one child in a hundred is either a stammerer or a stutterer.

Dr. Hudson-Makuen[2] estimates that there are upwards of 300,000 stammerers in the United States; of which number about one-fourth will overcome the defect of their own accord; the remaining three-fourths must expend a great deal of time and energy upon the work of recovery and secure in addition the help of a specialist in speech defects.

Germany[3] leads all countries in the establishing of public schools for the treatment of speech defects.

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[1] Physical Nature of the Child, p. 58.

[2] See Medical Record, Dec. 18, 1909, p. 1016.

[3] For a list of the countries having classes for children with speech defects see Hall's Educational Problems, Vol. 2, pp. 114-115.

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Dr. H. Gutzmann, who has charge of the Ambulatorium for speech defects at the Polytechnic Institute of the University of Berlin, estimates that there are in Germany 100,000 stuttering school children between the ages of six and fourteen years and 200,000 suffering from the defects grouped under stammering.

The course for stutterers and stammerers at Mannheim may be taken as a type of such courses in many German cities. In 1909, Mannheim had two classes for stammering children and one for stuttering children. The average attendance in the classes for stammerers was twelve, for stutterers fourteen. During the year, fifty-six pupils attended the former classes and fifty-four the latter. Of the stammerers forty were cured, and twelve were much improved in speech; of the stutterers forty-one were cured, and twelve made improvement. The pupils were given instruction for three or four hours a week.

The school for stutterers in Vienna, Austria, has a course covering five weeks with two hours of instruction each day. The average attendance is eight. The children are withdrawn from regular school attendance, and have to present a medical certificate to the effect that they are free from any organic defect that would interfere with the success of the special instruction. The parents co-operate in the treatment; a special room at home is given to the child where he practices special exercises four hours each day. During the first two weeks of the instruction he is not allowed to speak except to practice the exercises prescribed. Keeping silent is said to be of much importance. Parents are urged to cast no doubt on the success of the instruction. At the end of five weeks the child is sent back to the regular school, and his regular teacher is given advice as to what is to be done to keep the child from falling back into his old ways of speaking.

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Dr. Thomas J. T. McHattie[4] of Edinborough regrets the backwardness of England in the provision of classes for the correction of speech defects. He reports that experimental centers for carrying out this work are soon to be open in London.

Within the last few years several cities in the United States have established special schools for children who stutter or stammer. Seattle, Washington, was one of the first cities to establish such a school in 1909, but carried it on for only three months. This school was carried on in a room of a centrally located school building and enrolled children from all parts of the city. Superintendent Frank B. Cooper of Seattle writes that the school was under the direction of Mr. M. R. Hatfield and that his work was successful. "Usually it did not take him more than six weeks to cure a child of the habit."

In Milwaukee in 1909, two classes for stammerers were established, one at the School for the Deaf, and one at the South Division High School. Superintendent Carrol G. Pearse in his report for 1910 writes as follows concerning these classes: "The teacher in the School for the Deaf devoted all the time to this work and had at the end of the year seventeen pupils. The teacher in the South Division High School had four pupils in charge, and devoted only a part of the time to this work. The remaining time was employed in rendering special assistance during their study time to several deaf pupils, who, having finished the regular work of the eighth grade in the School for the Deaf, were attending High School. The stammering pupils were given exercises to deepen breathing and render it more regular and rhythmic; they were given such physical exercises as were calculated to steady the

[4] See his The Educational Treatment of Stammering Children. School Hygiene (London) Vol. 2, No. 6, pp. 308-314, 1911.

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nerves and give better and steadier nervous poise; they were taught to speak without haste, nervousness or self-consciousness. Singing was practiced and repetition of poetry was made use of for the valuable influence exerted by the rhythm of the verse.

"The results were gratifying. Some pupils, who were about to leave the high school on account of this affliction, were so greatly improved that they continued their studies, in which they were able to make good progress, satisfactory to their teachers, and without embarrassment and humiliation to themselves. Some pupils were benefited sufficiently so that they went back to the regular classes in their home schools, either entirely cured, or so much improved that they hoped, by continuing the exercises in which they had been trained, to complete the cure without the necessity of attending further the special class. Some of the pupils attending were improved, but need to return for further training with the opening of the new school year.

"While attending the special classes the pupils, wherever possible, went for a part of the time into the regular classes of the nearest district school and did there such work as was practicable."

In December, 1909, the Board of Education of Chicago authorized the Superintendent of Schools, Mrs. Ella Flagg Young, to employ unassigned teachers and cadets to give special instruction to children having defective speech for the purpose of giving them control of their speech organs.

To carry out the plan ten young women, selected from the class to be graduated from the Chicago Normal School in January 1910, were given special instruction in speech defects and their remedies. This special instruction included a "study of the mechanism of speech, of breathing and breath control, and analysis of the elementary sounds of the English language, the

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different qualities of the speaking voice, emphasis, modulation and other essential qualifications for beautiful and effective speech." After studying these chief characteristics of the normal speaking voice, the students gave their attention to the two classes of speech defects: major,—including stammering, stuttering and hesitation; minor,—including "lisping, burring the r, defective articulation, imperfect vowel moulding, nasality, and other disagreeable qualities."

"Major defects," writes Miss Virginia W. Freeman[5] who has charge of the work, "we found, are comparatively uncommon, but there are very few persons whose delivery is not marred by one or more minor vocal imperfections."

These training students were given opportunity to observe the speech defects among the pupils enrolled in the three practice schools connected with the Normal School. These three schools have pupils representing many racial types, thus enabling the cadet teachers to become conversant with the variations of speech due to racial differences. They also observed the effect upon the character of speech of nasal catarrh, tonsilitis, chronic sore throat, malformation of the mouth and lips; such as hare-lip and "cleft palate, elongated uvula, and the imperfect articulation of the teeth or absence of teeth."

After these young women were given their preliminary training, each was assigned to a given number of schools so grouped that each teacher had about forty pupils under her charge. At first many children with adenoids, enlarged tonsils, cleft palates, and other

[5] See article, The Proposed Movement for Treating Stammering in the Public Schools. Educational Bi-Monthly, June, 1910, p. 410. See also Miss Freeman's article, Treatment of Defective Speech. Educational Bi-Monthly, April, 1912, p. 333. This article describes five cases of children treated for speech defects in the Chicago public schools.

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abnormal conditions were assigned to the teachers. Such children were recommended for proper medical, surgical, or dental aid before corrective speech treatment could be effectively given.

The teacher visited the school assigned her twice or three times a week according to the number and the severity of the cases.

The children were given their speech instruction in a room apart from the regular classroom, either individually or in groups of not more than three, instruction being adapted to individual needs. The instruction included exercises in breathing, in relaxation, speech gymnastics, practice in rhythmic utterance and slow pronunciation. The teacher, in co-operation with the school nurse, the school physician, and the room teacher, made a history and record of the more difficult cases; the teacher also made a record of the exercises given each child and a monthly report of each teacher's work was made to the Superintendent of Schools. The results of the work have been satisfactory.

Different Forms of Stammering, Stuttering

Stuttering and stammering may be the cause of retarded mental development. A child suffering from such a defect tends to become self-conscious and to express himself so little that mental growth is sometimes retarded. Stuttering children are usually overage for their school grade. Stammering is sometimes used as the generic term to cover defects known as stuttering but most authorities seem to prefer to use the two terms as co-ordinate, covering two different groups of speech defects.

Stammering

Kussmaul distinguishes two kinds of stammering: *organic* and *functional:* the former due to some physical

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defect; such as hare-lip, cleft-palate, obstruction of the soft-palate by growths in the nasal cavity, abnormal structure of the jaws, defective teeth and defective hearing; the latter, functional stammering, has no organic basis. It may be either motor, due to improper training of the speech organs, or sensory, due to lack of attention to the proper sounds of words, i. e., "defective acoustic attention" as Liebmann[6] puts it.

Liebmann says that the defect is called general stammering when it includes many different sounds and renders speech difficult to understand; it is called partial stammering when only a few sounds are distorted as in lisping and nasality.

In intelligent children the defect is confined in most cases to single sounds and syllable groups, but in the less intelligent it may extend to words and sentences also.

Sounds that the stammerer cannot form he either leaves out or substitutes similar sounds for them. As a rule these omissions and substitutions are, in individual cases, fairly regular and occur almost always in the same manner. "A stammerer," writes Liebmann, "who cannot form correctly the sounds represented by k, g, f, v, ss, s and sh, leaves out f and v, saying, e. g., at for fat, ale for vale; for k, g, ss, s he substitutes t or d; for sh a ch"; thus he says taddy for taggy, mett for mess, tō for so, chell for shell. In children who are mentally retarded the sounds omitted or substituted are not always replaced by the same sound but by all sorts of sounds which have no similarity to the one omitted. What is called sound mutilation (Verstümmelung) occurs when the soft palate fails to close the nasal cavity in the pronunciation of all sounds except the nasals, m, n and ng, producing what is called *open*

[6] See article on Stammering in Handbuch der Heilpädagogik, p. 1642.

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nasality (rhinolalia aperta). Liebmann calls attention to the fact that in feeble-minded children, even after the obstructions in the nasal cavity that prevent the closing of the palate have been removed by an operation, the nasality still continues. Such a child is able, with strong encouragement, to repeat correctly sounds that are pronounced for him, "but spontaneous speech remains unalterably bad."

A speech defect known as *obstructed nasality* (rhinolalia clausa) is caused by the obstruction of the nasal passages. This defect makes it difficult to form the nasal sounds, m sounding like b, n like d and ng like g.

Persons afflicted with rhinolalia clausa have less difficulty in making themselves understood than those afflicted with rhinolalia aperta.

There are cases of partial nasality. This frequently takes the form of inability to pronounce the l, substituting for it the sound of ng, as *winging* for *willing*. Liebmann calls attention to the fact that where, as is often the case, this is the only sound that is incorrectly spoken, it is clear that there is no organic defect, else there would be failure to pronounce other sounds correctly. This fact is often overlooked, and operations are made without success.

Under partial nasality we have a distortion of the s sound known as sigmatismus nasalis in which defect a peculiar snorting sound is substituted for the s.

In simple lisping (sigmatismus simplex) the s and ss are sounded like th, the point of the tongue being extended so as to lie between the teeth instead of being wholly back of the teeth as it is when the s sound is correctly given. When this defect becomes so general as to include the sounds represented by sh, soft g, y, x, z and initial ch, it seriously affects the clearness of speech so that many words cannot be distinguished

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from one another; thus it is almost impossible for a child so affected to learn to read orally.

The difficulty is still more complicated in lateral lisping (parasigmatismus lateralis), the s sounds being formed between the sides of the tongue and the back teeth, thus substituting a disagreeable lateral hissing for all s sounds.

Treatment of Stammering

The curing of the stammerer will be brought about in a large measure by teaching him the correct position of the organs in forming the sounds with which he has difficulty. In teaching the correct positions of the visible speech organs a mirror is of great assistance: this should be large enough so that when it is placed upright at a slight angle on a table in front of teacher and pupil the faces of both can be seen side by side, and the movement and position of the speech organs easily noted.

The correct position of the speech organs in forming the different sounds may be found in books on phonics and voice culture. In severe cases of stammering a speech specialist should be consulted.

Stuttering

Stuttering is characterized by a suspension of the continuity of speech, due to lack of co-ordination in the movements of the muscles of the speech organs. Liebmann[7] says that the basal cause of stuttering is a nervous disposition which leads the stutterer to react to slight stimuli to which the normal person would pay no attention.

In nervous children stuttering may be developed by an attack of infectious disease; such as measles,

[7] See article, Das Stottern, Handbuch der Heilpädagogik, p. 1266.

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scarlet fever, influenza, or diphtheria, by a hard fall, a bad fright and by psychic contagion.

It is often inherited. Dr. Thomas J. T. McHattie is of the opinion that certain families exhibit "an inherited weakness of the nerve structures underlying the function of speech." He believes that if all the facts could be ascertained this neurotic predisposition would be found to be present in a very large majority of all cases of the defect and that "it accounts for the frequency with which the defect follows some nervous shock, prolonged illness, or other depressing influence by which the vitality of the already weakened nerve elements is further lowered."

The fact that the mechanical methods characteristic of the quack cures for stammering and stuttering take no account of this nervous weakness is the reason, to Dr. McHattie's[8] mind, for their frequent failure.

Both Dr. J. Herbert Claiborne[9] of New York and Dr. E. Bosworth McCready of Pittsburg agree that stuttering is the result of imperfect cell development in the brain, and that the defect is allied to symbol amblyopia;—letter, figure and word blindness.

Dr. Claiborne states that Dr. McCready reports that a young man of twenty afflicted with word-blindness combined with stuttering was cured by reversing his dexterity. This young man could not recognize words and stuttered so he could scarcely make himself understood. "He was finally able to read and speak fluently."

Dr. McCready[10] calls attention to the fact that "general kinæsthetic impressions have a decided influence in the development of the speech centers as

[8] School Hygiene, Vol. 2, No. 6, June, 1911, p. 310.

[9] See article, Types of Congenital Symbol Amblyopia, Proceedings, Grossmann School, 10th Anniversary, p. 59.

[10] See article, Biological Variations Causing Retardation, Proceedings, Grossmann School, 10th Anniversary, p. 51.

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shown by cerebral hemiplegics after tenotomy. The more vigorous and dexterous use of the muscles of one side would, therefore, assist materially in speech development." Children, according to Dr. McCready, who use the left hand by preference should be allowed to continue to do so until speaking and writing habits are fully developed and not forced, as is usually the case, to use the right hand. He cites the case of a little girl whose development was normal in every way except that she did not begin to form words until she was about a year and a half old. Soon after this an attempt was made to correct her tendency to left-handedness with the result that she suddenly ceased to talk, using unintelligible phrases and gestures to express her desires. The child's mentality was on a level with other children of the same age. "Her appreciation of words and sounds was very good. Her articulatory organs showed nothing abnormal. After a week or two of special training with liberty to use the left hand freely she began to speak again at about the stage where she had left off." In view of the fact that there has long been a theory that interference with the tendency to left-handedness in some young children tended to interfere with normal speech development these views just cited are particularly pertinent.[11]

Treatment of Stuttering

The method that has been most widely and successfully used by Gutzmann and others consists of a carefully graduated set of exercises which are intended to strengthen the muscles concerned in respiration and to regulate the respiratory function which is often

[11] See article Sinistrality and Speech, P. B. Ballard, Journal of Exp. Pedagogy (London), June 1912. Vol. I, No. 4, pp. 298-310.

"It follows that the art of writing should be practised by the superior hand, and by the superior hand only."

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poorly developed. First of all the patient is taught how to breathe properly which includes the filling of the chest at proper intervals and expelling the air through the glottis in such a manner that the sounds are properly produced. He is then taught how to produce his voice correctly "and to combine and co-ordinate the two functions of breathing and speaking in such a way that in time the process becomes a natural one and the difficulty disappears." The second method is that of hypnotic suggestion. Psycho-therapy does not necessarily imply actual hypnotism, but Dr. McHattie believes that "by the employment of hypnotism many subjects could be cured outright."

Mr. Courtland MacMahon[12] thinks that treatment for the defect could be given in the public schools in classes composed of ten or fifteen pupils. The pupils should be taught to breathe properly and during the lesson each child could be examined individually to see if the sounds are being correctly formed. There could be class exercises on the main vowel sounds and their combinations, first using the singing voice, then the speaking voice. Mr. MacMahon puts stress on the value of the singing voice in the treatment as does Dr. Scripture. He does not mean by this "the use of a silly sing-song voice but a voice full of resonance and music which depend on perfect breath control, perfect vowel production and perfect articulation." In being able to lift the singing voice into the speaking voice lies, according to MacMahon, the greatest chance of cure.

After the exercises on the sounds, there could be class exercises on words and easy sentences. At about this stage the more pronounced cases should be taken from the class for individual treatment by a "trained

[12] See his article, Curative Treatment of Stammering, School Hygiene. Vol. 2, No. 6, p. 321. London, 1911.

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expert," the milder cases being allowed to go on as a class. The teacher of such a class must have unlimited kindness, patience, and forbearance. Parental co-operation must be secured and the parents must be made to understand that the child is to be encouraged in every way, never rebuked. Both the child and parents are to be informed that even after a cure is apparently effected there may be an occasional return of the spasms when the child is fatigued or in times of emotional disturbance. Liebmann has said that there are times when every person stutters or stammers more or less.

Liebmann[13] also holds that the customary breathing, voice, and articulation exercises are wholly superfluous. He further says that Gutzmann's exercises in speaking in a soft voice "are useless and time wasting." The repetition of the same exercises again and again as recommended in so many practice books is also condemned. He uses such exercises only at the very beginning of the treatment, passing as soon as possible to spontaneous speech even at the first consultation if it is possible. He does not believe that it is well to separate the patient from his environment during the treatment. Liebmann's method seems extremely sensible, proceeding in a rational way to the acquirement of natural speech, avoiding the tricks and many of the burdensome and monotonous exercises of other methods.

[13] See article, Das Stottern, Handbuch der Heilpädagogik, p. 1665.

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Chapter Sixteen

THE MONTESSORI METHODS

Not long ago an article appeared in one of the popular magazines, entitled, "An Educational Wonder-Worker." This wonder-worker is Dr. Maria Montessori of Rome, and her work has attracted the attention not only of Italy but of many other countries. Her first work was done as directress of the Scuola Ortofrenica, or "mind-strengthening school," where from 1898 to 1900 she had marked success in applying the methods of Seguin and Itard to the education of feeble-minded children. She gave up this work in 1900, to devote herself to the study of experimental psychology, of "pedagogic anthropology" and of the current methods of modern education. At the end of seven years' study, in 1906, Edoardo Talamo, a well-known engineer, appointed her directress of some new infant schools that were to be established in one of the crowded tenement-house districts of Rome. These infant schools were part of a model tenement house scheme which was being carried out under the direction of the *Instituto Romano di Beni Stabili,* a real estate organization of Rome. The idea was to offer special inducements in the way of prizes, for the tenants to keep their apartments clean and decent. In the group of tenement houses managed by this Company, four infant schools similar to the French day-nurseries were established in 1907 and 1908. These schools or "Houses of Childhood," as they were called, were carried on under the following set of rules:

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"Attention must be paid to the health and the physical and moral development of the children by means of lessons and exercises adapted to their age.

"There will be in charge of each *Casa dei Bambini* a directress, a physician, and a caretaker. All children in the block between the ages of three and seven years have the right of admission to the *Casa dei Bambini.*

"The parents of children attending the *Casa dei Bambini* pay no contribution whatever, but they assume these imperative obligations: A. To send at a specified hour their children to the schoolroom, clean in person and clothing, and with a suitable pinafore. B. To show the greatest respect and deference towards the directress and all other persons connected with the *Casa dei Bambini,* and to co-operate with the directress in the work of educating their children. At least once a week mothers will be able to speak with the directress, reporting observations on their own children in their home life, and receiving from the directress notes and suggestions for the welfare of the children.

"Those pupils will be expelled from the *Casa dei Bambini,* (a) who present themselves in an unwashed and slovenly condition (b) who show themselves not amenable to discipline, and (c) whose parents fail in respect to those placed in charge of the *Casa dei Bambini,* or in any way threaten to destroy by bad conduct the educational work which is the aim of the institution."

"In the assignment of annual prizes for the best-kept house, account will be taken of the way in which the parents have co-operated with the directress in the education of their children." Yet Dr. Montessori does not believe in offering prizes to children in her schools.[1]

[1] See page 101. The Montessori Method, F. A. Stokes Co., New York, 1912.

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These tenement-house schools under the direction of Dr. Montessori were extraordinarily successful. They are really the novel part of her plan; but for them it is doubtful if her methods would have attracted much attention. There is something strongly fascinating about the very term "House of Childhood."

The schools are for children of kindergarten age, from three to seven, although Dr. Montessori has in view the extension of the methods to the education of older children.

The schools are in session from nine o'clock in the morning until half past five in the afternoon; the regular school work, however, occupies only from two to two and a half hours of the day's session.

On coming to school in the morning, the children first visit the lavatories where they are taught to wash their hands and faces, neck and ears. They then put on their pinafores, helping one another, if necessary. Their next duty is to look after the order and tidiness of the schoolroom, dusting where necessary and putting everything in its proper place. Then comes play in the garden until ten o'clock. As has been said, Montessori's methods are largely adaptations of those of Seguin and Itard, methods designed by those masters to evoke the dormant powers of feeble-minded children and make them, so far as possible, self-helpful.

The fundamental basis of this work is sense training for which specific exercises have been evolved. The hand and finger muscles are developed by exercises in "buttoning and unbuttoning, hooking and unhooking, lacing and unlacing, tying and such like," things that a child can do himself and which render him self-helpful at home and at school. Little children trained in this way are able to dress and undress themselves, thus saving their mothers much work.

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It is very likely if Montessori had evolved her methods in England, Germany, France or in the United States, that they would have caused little of the stir that they have aroused in Italy, for many of the methods she advocates, have long been in use in some of the schools of these countries, especially in France and in the United States.

The late Alfred Binet, the noted French psychologist, asserted over and over again in many of his writings that the methods of education that obtained in the schools for the mentally defective were destined to supersede, in large measure, the methods of instruction in the regular public schools. Such methods aimed to develop the whole child, while the traditional methods appealed only to one side of his nature. The methods worked out by Binet and Vaney, especially their so-called orthopedic exercises, are very similar to the Montessori exercises and are especially valuable. These exercises have been published in pamphlets issued by the *Société libre pour l'étude de l'énfant* of Paris, of which society the lamented Binet was long the directing spirit. Of course, all these methods trace back to Seguin, the Pestalozzi of education for abnormal children.

Furthermore, it may be of interest to state that these methods have been long in use in many of the better schools for the training of feeble-minded children, both in America and in Europe. Mention may be made of the excellent course of study of the Bancroft Training School of Haddonfield, New Jersey, in which Miss Bancroft and Dr. Farrington have carefully worked out a graded curriculum for the training and development of subnormal children. Their course in sense training is especially valuable. Such schools as those at Vineland, New Jersey, and Waverley, Massachusetts, where Dr. Goddard and Dr. Fernald have

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worked out scientific methods of training defective children, should not be forgotten when we would pay tribute to a new comer in this field of education.

Montessori is the new comer, and she is hailed as a great discoverer in education, the peer of Froebel and Pestalozzi; indeed there are some who think that the Montessori methods are to replace those of the kindergarten.

Now just what has this brilliant Italian woman done for education? She has made no discovery; she has merely been the first to get a good opportunity to apply the methods that have long been in use in schools for defective children to the education of normal children. So far as giving the child freedom in the schoolroom and appealing to the principle of self-activity, this is the fundamental doctrine of Froebel. Montessori's work is merely supplementary to that of Froebel and Seguin and their many followers. She has merely applied some of the newer psychological knowledge to help to modernize the work of some of the old pedagogical masters. So, while we should give due honor to the able Italian physician and anthropological pedagogue for the work she has done, we should not be blinded by the fact that much of the credit now being given to her should be shared by others who have patiently worked out and elaborated the methods and much of the apparatus Montessori is now using in her Houses of Childhood. It should, furthermore, be understood that much of the apparatus now in use under the Montessori patented system of education has been in use for a score of years in many of the training schools for feeble-minded children. Similar apparatus can be made and used by anyone who wishes to do so. The most valuable part of the Montessori apparatus is not original and very similar forms just as useful for educational purposes may be made in any manual training shop.

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The Manual of the Course of Study of the Bancroft Training School for Subnormal Children just mentioned, contains, with very few exceptions, everything of real value in the line of motor-sensory training that is in the Montessori book and much besides that is of great value. Moreover, it leaves out the mere personal discussion which, while it makes the Montessori book readable, often obscures the real points of her methods.

Dr. Farrington's article on "Systematic Motor and Sensory Training" in The North American Journal of Homœopathy for March, 1910, gives, in the main, the essentials of the methods of sense training advocated by Montessori, in a very terse and clear manner.

It can be readily seen by comparing the exercises in sense training recommended by Montessori with those described in the second part of this book, that there is nothing essentially new in this the most important part of the Montessori system.

The Method of Learning to Write and to Read

The most important contribution that Montessori has made to education is her method of teaching little children to develop the pen holding muscles of the hand preparatory to learning to write.

For this purpose a series of geometrical forms in metal is used. The child places these forms or frames upon paper and by means of them draws outlines with colored pencils on the paper. On removing the frame there remains on the paper the outline of a geometric figure. "This is the first time," says Montessori,[2] "that the child has reproduced through design a geometric figure. Until now, he has only placed the geometric insets above the figures delineated on the

[2] The Montessori Method, p. 272.

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three series of cards. He now places upon the figure, which he himself has drawn, the metal inset, just as he placed the wooden inset upon the cards. His next act is to follow the contour of this inset with a pencil of a different color. Lifting the metal piece, he sees the figure reproduced upon the paper in two colors. Here, for the first time is born the abstract concept (?) of the geometric figure, for, from two metal pieces so different in form as the frame and the inset, there has resulted the same design which is a line expressing a determined figure." The child thus learns to trace lines determining figures preparatory to tracing graphic lines that will determine words.

Next follow exercises for developing the muscles that hold and move the pen or pencil in writing. These consist of filling in the outlines the pupil has drawn with the colored pencil, the child being taught not to allow the lines he makes to extend beyond the contour. In these filling-in-exercises, the child performs again and again the movements necessary to develop the pen or pencil holding muscles, and this work is done without fatigue. At first the child fills in all sorts of forms; rectangles, triangles, ovals, using whatever colors he wishes, but later on he is limited to two colors, dark blue and brown, these being the colors of the insets and the metal frames. He is thus enabled to produce the appearance of the forms he used in making the contours. Through practice of these exercises, the child soon learns to keep within the limits of the outlines and the strokes of the pencil "at first short and confused, gradually become longer and more nearly parallel until in many cases the figures are filled with uniformly regular strokes extending from the upper to the lower side of the figure. When this stage is reached it is evident that the child has mastered the art of holding the pen or pencil. Montessori says of these

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exercises: "I do not believe that any means can be found which will so successfully and in so short a space of time, establish this mastery, and with it all the child is happy and diverted." Little children of four and five years of age, in this way gain, in a few months, power in this particular equal to that of the third grade pupil in the Italian schools.

The children like these exercises and continue them even after they have learned to write, thus "perfecting themselves in writing, without actually writing."

The letters of the alphabet are taught by means of exercises that establish the visual-muscular image of the letter forms and establish the muscular memory of the necessary movements in writing these letter forms.

The single letters of the alphabet cut from sandpaper are mounted on cards, while groups of letters are mounted on larger cards. The vowels are cut from light-colored sandpaper and mounted on dark colored cards; the consonants and the groups of letters are cut from black sandpaper and mounted on white cards. In teaching the letters the sound and not the name of the letter is given. Since, in the Italian language, each letter represents a constant sound, the basis for phonetic reading is thus easily laid. The matter is much more difficult in a language like English, which possesses many phonetic irregularities.

As soon as the child is given the sound of the letter he is taught to trace it with his fingers, using the same movements that would be used in writing. "Knowing how to trace" will consist in knowing the direction in which a graphic sign must be followed. The roughness of the letter serves as a guide to keep the fingers in their proper path. After some time given to tracing, Dr. Montessori's children discover almost spontaneously and with great delight that they can write.

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The Didactic Apparatus

The apparatus of the Montessori schools shows plainly that it had its origin in schools for the feeble-minded. It is, to say the least, rather unattractive. It would seem that the exercises in buttoning, lacing, tying and the other practical exercises might be much better taught by means of dressing and undressing dolls. In this way the exercises could be given more human interest, and if the dolls were rightly chosen and dressed, the work could be made highly educative on the informational side. The spiritual or personal side of the Montessori material is almost *nil*. This would not be so if the sense exercises were a little more closely connected with real life, as they would be, provided dolls were used for teaching the practical exercises in place of the rather unattractive frames of the Montessori apparatus.

The kindergarten and the Montessori schools have yet to learn the value of dolls as a means of teaching many practical as well as spiritual things to young children.

The Mother's Place in Education

Montessori[3] said in her inaugural address at the opening of one of the Houses of Childhood that "man is not only a biological but a social product, and the social environment of individuals in the process of education, is the home." This is true, but Montessori fails to add that the most significant factor in the home is the mother, and goes on to show that her houses of childhood will enable the mothers of little children to become wage-earners by providing a place for the children to stay and be properly cared for while the mothers are away from home. Thus the motherly care of little children is communized and the poor mother may

[3] See page 64 of The Montessori Method.

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now "say like the great lady, 'I have left my son with the governess and the nurse.'"

Montessori with her communizing ideas is sowing the seeds of a dangerous doctrine. The best things in the spiritual world have come from the mother love which develops in a true home where the mother has the direct care of her children. So far as economic and social conditions have made it necessary for the mothers to leave their children at home while they are called away to perform the duty of wage-earners, such economic and social conditions are bad and the endeavor of society should be to eliminate such conditions. Pestalozzi and Froebel were great to the extent that they emphasized the element of mother love in education. The two words, "mother" and "child" were most significant to Froebel.

So far as I can see this spiritual mother element is lacking to a large degree in the Montessori schools. The children are little "men" and "women." When you read about them, they seem wise beyond their years. One does not think of them as the buoyant children of Froebel, real children who live out their childhood naturally. For her schools, Montessori has coined the word "directress" to take the place of the word "teacher." The dry material teaches; the directress merely observes. Here is system teaching.

Undoubtedly, many teachers in our modern schools do too much work for the children and talk too much to the children, but it is well not to go to the other extreme and almost eliminate the personality of the teacher from the school. Teaching or education is most of all a personal thing, where heart touches heart and soul is enkindled by soul. As a model to be imitated, as a light to be followed, the teacher should occupy a prominent place in every school. A child develops his individuality not alone by doing things,

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but by imitating more mature personalities. His liberty allows him only to act within certain limits. He learns these limits by listening to the advice and warnings of his elders, and by observing and imitating their acts. An intelligent loving mother is the best teacher of these limits to little children; next to her we place the consecrated teacher, one who is imbued with the ideas for which Pestalozzi and Froebel stood. Such a mother or such a teacher will need little didactic apparatus to lead her children through a normal childhood. It was Froebel's idea, as one will see by reading his interpretation of his scheme of education given in the translation of his book, "Education by Development," to have the mother teach her child until it had learned to read. As Hughes[4] well says: "Froebel studied the child to help it to self-education, to discover the order of its mental and moral awakening and the way in which it becomes acquainted with its environment and enters into social relationships and claimed that all educational methods should be in harmony with the natural processes of the child's own evolution."

Here are stated the basal principles of Montessori's auto-education and much more in addition. With Froebel, the mother or teacher was a thought director and stimulator. The development of the child was prophetic as well as vestigial, reaching out toward a vast future as well as harking back to a vast past. It was this idea that led Froebel to place the human, the moral or the spiritual side in his educational system above the physical, although he did not fail to recognize the significance of the latter. His whole idea, as Hughes so well shows, was to develop in the child apperceptive centers of feeling as well as of

[4] Froebel's Educational Laws, p. 1.

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intellect. If we view his doctrine of symbolism, upon the soundness of which Dr. Harris said Froebel's system must stand or fall, in the light of gradually leading the child to see, perhaps rather feel, the spiritual behind the material, of developing in him the feeling of awe and reverence (the basis of all true morality and religion) in the presence of nature and of the sublime natural and human forces, it loses its abstruseness and becomes illuminating and inspiring to both teacher and child. This symbolism or mystical side of Froebel's system which looks upon nature, both animate and inanimate, as revealing the divine unity, is really its enduring principle. It is, indeed, the basis of all spiritual evolution; because of it Froebel's system will live where systems, like that of Montessori, which lack it will pass into obscurity. It is only the sublime insight of symbolism that could lead a man to pray as did Froebel that it might be given him "to educate men and women who shall stand with their feet on God's earth while their minds penetrate God's heaven, who shall be rooted like the tree in the one, that like the tree they may aspire toward the other; whose hearts shall unite earth and heaven, being fed by the rich and varied life of the world, and filled with the blessed peace of God."

Montessori has, however, done the educational world true service and has, furthermore, written a very helpful book which may be read with profit by all teachers if they will take it up with the understanding that Montessori has not spoken the last nor necessarily the best word in education. She has said much that is good, a large part of which had already been said by other writers, especially by Froebel. Systems of education to be really valuable must grow; they do not spring Minerva-like from the brain of any individual.

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Part Two

SUBNORMAL CHILDREN

The Organization of Auxiliary or Special Schools and Classes for Mentally Defective Children

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Chapter One

SPECIAL OR AUXILIARY SCHOOLS AND CLASSES FOR MENTALLY DEFECTIVE CHILDREN

Introduction

The chapters which follow treat specifically special schools and classes for abnormal children. There are several other kinds of special classes in the public schools. The special classes for the blind, the deaf, cripples, epileptics, and stutterers and stammerers are all represented in different school systems of the United States. There are also, as we have seen, the special disciplinary or training classes for so-called incorrigible or unruly pupils, and there are the ungraded classes for foreign speaking pupils as well as such classes for normal pupils who are either behind in their work or who wish to hurry along in their studies in order to make a grade. Again, we have classes for specially gifted pupils and classes for boys and girls who have not been able to complete the sixth grade by the age of fourteen and who are assigned to classes where special emphasis is placed on manual and industrial work. All these classes are still in the plastic period of development. In some cities that have had such classes for a number of years, the several types of pupils are very poorly differentiated. The incorrigible, the mentally defective, the backward, the cripple, and the epileptic are often found in the same class. In a large city, of course, this is inexcusable. Such pupils do not belong together.

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It will be one of the main aims of this study to show the need of special classes for the mentally deficient pupils. By establishing and properly organizing such classes, much may be done to increase the efficiency of any school system which has 1,500 or more pupils. By allowing mentally defective pupils to attend the regular classes much injury is done them as well as their normal classmates. They are forced to attempt work which they cannot do, and their normal classmates are forced to wait while the teacher laboriously tries to teach the former something they cannot comprehend. One mentally deficient pupil in a class is said to take more of the vital energy of a teacher than five normal pupils, with little or no result to show for the energy expended.

There are a number of authorities who maintain that the special classes in the public schools should be for the simply backward pupil, the pupil who is normal, but of slow mental development. The really mentally deficient pupils, such writers would place in institutions where they would have permanent care at least for the major part of their lives. This, undoubtedly, is a wise plan. That the really feeble-minded or mentally deficient pupil, after he has reached adolescent years, is a serious menace to society, so long as he is at large, cannot be disputed. Such children should for life be under the direction and protection of some well organized institution. In such institutions they may lead happy and even useful lives. Left to themselves they will, as a rule, lead a precarious existence. Furthermore, unless under restraint they are almost sure to reproduce their kind either legitimately or illegitimately.

It is well to look forward to the time when every large city will have an institution where such children may be permanently cared for and when every county or district shall have such an institution to which men-

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tally deficient children from certain areas may be sent for permanent care and protection. It is not too much to expect that such an ideal may be realized within the next few decades. It must, in fact, be realized unless the communities are willing to be swamped in degeneracy, vice, and crime.

Dr. William Healy[1] writes: Eight hundred consecutive unselected offenders" (from the file of the Chicago Juvenile Court) "show seven and a half per cent. known epileptics, others suspected. They are the most dangerous and incalculable criminals. Pleasant one day, vicious the next, committing heinous crimes: about twenty per cent. of the same group feeble-minded, most of them high grade and readily overlooked in court procedure; after all, fairly good talkers."

In the meantime, however, something must be done to temporarily meet the needs of the really mentally deficient children. In Germany such mentally deficient children are kept in the public schools until they have reached the age of fourteen when they are turned out upon the community to meet their more or less unhappy fates. The condition is similar in England where the pupils are kept in the special schools until the age of sixteen and then turned out to shift for themselves. The careers of these children show that very few of them ever become really self-supporting. Especially is this true in the large cities. In the smaller towns and country villages the mentally deficient person stands a better chance of eking out an existence. Goddard has justly criticised the German and English methods of disposing of their mentally deficient, and he has made a strong plea for America

[1] Quotation from article "From the Report of Committee on Provision for the Feeble-Minded and Epileptic." The Training School, May 1912, p. 46.

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to learn a lesson from their mistakes, by providing in America, as soon as possible, proper custodial care for all mentally deficient persons. This must ever be the aim. There are, however, several preliminary steps leading up to this ideal.

In the first place we do not even know how many mentally deficient children or persons there are in the United States. In only a very few places has any census of these persons been taken. We have several general estimates but these are probably too small. We know the results of the census taken in Great Britain and, of course, we may draw certain inferences from that study as to the conditions in our own country. Philadelphia has lately taken a census of the mentally defective pupils in the public schools. Some 1,700 pupils have been found. Only a small fraction of these pupils are being given instruction in special schools. Furthermore, this census does not apply to the children of the parochial schools, and the number of such children is large and, as they represent the poorer class of homes, it may be inferred that the percentage of defectives among them is relatively large. The first step then is to ascertain the number of mentally deficient pupils needing special instruction. The next step is to provide special schools in connection with the regular public school system to take care of such pupils until such time as they may be transferred to the permanent care of a special institution.

In the following pages short descriptions are given of the development of auxiliary or special schools and classes in Europe and the United States.

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Chapter Two

THE DEVELOPMENT OF AUXILIARY SCHOOLS IN FOREIGN COUNTRIES

The Auxiliary Schools of Germany

Maennel in his "Vom Hilfsschulwesen," of which there are two English translations, claims that the first special or auxiliary class for feeble-minded children was established by the school board of Halle in Prussian Saxony in September, 1859, following a plan advocated by Mr. Haupt, a principal of one of the Halle schools. In this class seventeen defective children were to be taught for some two hours each day. In speaking of this class Maennel says: "Quite a period of time passed before this new plan of instruction obtained daily in a single room for a class made up of children from the schools for the poor and from the folk schools, and finally included twenty hours of work per week. Still the credit of founding the first auxiliary class is to be conceded to Principal Haupt who died in 1904, after long and effective service as privy councilor and school superintendent at Merseburg."

W. Henz, in treating the subject of auxiliary schools in his "Leitfaden der gesamten Heilpädagogik" (Textbook of General Curative Pedagogy), 1909, does not see fit to give Halle the credit of establishing the first auxiliary class. He begins his historical account with a description of the movement led by Kern and Stötzner which resulted, in 1867, in the founding of the auxiliary class in the city of Dresden.

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It would appear also that the auxiliary class which was founded at Elberfeld in 1879 could lay more real claim to being a true auxiliary class than that which had its beginning at Halle.

According to Henz, special schools and classes were first advocated by Dr. Kern, the founder of the first asylum for idiots in Germany. In 1863 he delivered, in Leipzig, a lecture in which he advocated such schools and classes for children who could not be instructed advantageously in the regular classes of the Folk Schools. A year later Stötzner, a teacher of the deaf and dumb, further developed the idea in an article entitled, "Schools for Feeble-Minded Children." Soon after, a meeting of the friends of the movement was held in Hanover at which Stötzner repeated his appeal in behalf of his endeavors. He maintained that in all large cities schools should be established for feeble-minded children, in order that these children, who later, for the most part, might become a burden to the community, might through proper personal supervision and instruction be led to become useful members of society.

The first class for feeble-minded children was opened four years later in Dresden, chiefly through the zeal of Stötzner who worked indefatigably for the carrying out of his idea.

At the outset the movement for the establishing of auxiliary schools and classes made slow progress. Many well-known pedagogues were suspicious of these schools. The purpose of the new arrangement was not clear to many. After a time things began to be more hopeful. Several cities established auxiliary classes with results that gave courage to the promoters of the new movement.

In May 1894, an official decree was passed by the Imperial Board of Education in Prussia, authorizing

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the establishment of such schools for abnormal pupils of compulsory school age. A second decree, April 6th, 1901, accorded the auxiliary schools warm recognition and laid out plans for their further extension.

The growth of the auxiliary schools in Germany may be well seen from the following figures. In 1879 Germany had seven auxiliary schools; in 1889, twenty-one auxiliary schools; and in 1894, thirty auxiliary schools with one hundred and fifteen teachers, one hundred and ten classes, 2,290 pupils; in 1903, one hundred and sixty-eight auxiliary schools with about six hundred teachers, five hundred and eighty-eight classes and 11,016 pupils; in 1907, three hundred and fourteen auxiliary schools about one thousand teachers, nine hundred and twenty-one classes, and 20,151 pupils.

In 1910, of the 40 German cities having over 100,000 inhabitants, all had organized auxiliary schools. A great many of the cities of less than 100,000 have no auxiliary schools or classes, while some of the smaller places have such classes, Wasungen, with only 5,000 inhabitants, being one.

In 250 places the boys and girls are taught in mixed classes; four cities separate the sexes; four have both mixed and separate classes.

The proportion of boys to girls is 1 to .78.

It is interesting to note the proportion of mentally defective to normal pupils in the schools of the several cities. In Leipsic, in 1907, out of every 100 pupils 0.67 were mentally defective; in Munich, 0.48; in Berlin, 0.92. Meiningen had the highest number, 3 in every 100; Dresden the lowest, 0.31 in a hundred. To every 1,000 inhabitants in the German cities supporting auxiliary schools there are 1.56 mentally defective school children. Reckoning on the same basis, there would be in the whole of Germany some 90,000 mentally defective school children.

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According to Schröter, in October 1910, some 30,000 of these children were enrolled in auxiliary schools and some 7,000 in institutions. These figures show the work that still remains to be done in Germany, the birthplace of the auxiliary school, in the way of providing educational opportunities for this class of unfortunate children.

Great differences exist in the organization of the German auxiliary schools; in 1910, 120 auxiliary schools had three grades or sections; 63, six; 59, four; 40, two; 20, five; 11, one; 5 had seven; one had eight. In schools of three grades or sections, each grade is usually taught as two divisions.

Teachers in the auxiliary schools receive in the different cities from 50 to 450 marks each year more pay than the teachers in the regular schools.

The practice pursued in the German schools of allowing a mentally defective child to vegetate or retrograde in the regular classes for one or two years before he is sent to the auxiliary class is a questionable one. It obtains on the score that the child should have every opportunity to prove his ability to do the normal school work before he is placed in the class for defectives. It is, of course, commendable to seek to safeguard the misplacing of normal children in classes for subnormal. It is, however, a reflection on the science of medical psychology, if such a term may be used, to assume that it is not possible, in the great majority of cases, to determine whether a child is mentally defective or not within a few months after he has entered school. In the training and teaching of both the normal and the subnormal child, the early years are precious years and to allow these years to run to waste in the case of the mentally handicapped is especially reprehensible.

There has been some tendency to follow this vicious German practice in some of the other countries.

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It is to be hoped, however, that common sense and humanity will lead all intelligent directors of special schools to see that the welfare of the mentally defective child demands that his defect be discovered as early as possible and that this can be done accurately if the school physician has the time and requisite knowledge for making the necessary mental tests. Such tests should be made by the end of the first six months, at the longest, after the child has entered school. The Binet Scale would well serve the purpose. The determination, thus early, that a child is mentally defective and the assigning of such a child to a special school or class are in the interests of the child himself, his normal mates, and the teacher of the normal children who cannot afford to have his energy sapped by the presence of even one subnormal child in the class.

The Special Schools in England

Auxiliary classes were established in England in 1892, and were made part of the public school system by the Defective and Epileptic Act in 1899. This act makes provision (not compulsory) for the education in special classes, of children "who, not being imbecile, and not merely dull or backward, are incapable of receiving proper benefit in the ordinary public elementary schools."

These schools and classes must be so organized as to meet certain conditions as to school buildings, medical supervision, the admission of children, the maximum number in each class, the number of school hours, the course of study, and the qualifications of the teachers.

The aim of these schools is "to make every child profit by the instruction given, so that each, according to his ability, may enter the ranks of the wage-earning community." Some have estimated that about a third

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of the children attending these schools should, after attaining the age of twelve years, be placed under permanent care in institutions and that a third more should have more or less close supervision after leaving school.

The English auxiliary school movement had its beginning in Leicester, but arrangements for the establishment of auxiliary schools were made soon after in London and a special inspector was appointed to take the supervision of these schools. There are now special schools in Liverpool, Manchester, Birmingham and other large cities, but the smaller cities and the country at large have made little provision for the care of mentally defective children. The special schools of England are usually classed under two heads: (1) schools for the mentally defective, and (2) schools for the physically defective. The former correspond to the "auxiliary schools" of Germany; the latter, the schools for the physically defective, have been more widely developed in England than in any other country. They include schools for cripples and schools for epileptics. The term, "physically defective," as used for classification in the English schools does not include the blind and the deaf. It is not difficult for the medical officers, according to a Report of the London County Council, to determine the physically defective and certify them as "fit to receive instruction in the particular type of school to which they are admitted." Such children are usually suffering from the effects of injury or disease and can be readily noted as proper cases for special school instruction. It is, however, more difficult to determine just what cases should be assigned to the schools for the mentally defective as there is some difference of opinion as to what type should be placed in these schools. Tredgold is of the opinion that a comparatively large number of children are assigned to these schools who are not at all mentally

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deficient but merely backward or neglected. The number of mentally defective children on the school rolls for March 1908, was 6,159; of physically defective, 2,392. During the year 1908, 273 epileptic children and 627 imbecile children were excluded from school, no provision being made for them.

The day schools for the mentally defective numbered eighty-two with an average of 22.6 pupils to a teacher, while the day schools for the physically defective numbered twenty-eight with an average of 25.7 pupils to a teacher. In addition there is a residential home for mentally defective boys which had, in 1908, an enrollment of thirty-two. In 1908 there were two hundred and seventy-two teachers in the schools for mental defectives, and ninety-three in the schools for the physically defective. Twenty-five nurses were employed in the schools for the physically defective. In addition, one hundred and thirty-nine attendants (bathing women, cooks, and ambulance attendants) were in the service of the special schools.

The cripple children are furnished transportation to and from school in special ambulances belonging to the department. The schools for both the mentally defective and the physically defective are independent of the regular public schools and are maintained in separate buildings. These buildings have from two to twelve rooms. There are special centers where schools are maintained for the older boys. At these schools manual and industrial work is emphasized.

Almost all the teachers in the special schools are women. In order to teach in these schools a teacher must pass an examination qualifying her to teach in the so-called "Infant Schools," corresponding to the kindergarten in the United States. Children are admitted to the special schools at the age of five and many remain until the age of sixteen. Under the law,

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mental defect ceases at this age. Leathers, writing in the "Elementary School Teacher" for March 1910, shows the absurdity of this law as proved by the reports of after-care committees in many of the English towns. Reports from Liverpool show that only eighteen per cent. of the pupils have satisfactory records after leaving the special schools. Birmingham reports only sixteen per cent. of the cases under investigation as satisfactory. "It is evident, therefore," says Leathers, "that the work of the special schools is at present nullified for want of legal provision for the permanent detention of the worst cases in custodial homes."

Plan of Admission to English Special Schools

If a child in the regular primary school is thought to be mentally defective he is sent to the local special school for examination by the school physician. After the examination he is kept at the special school, for observation. After this probationary period he may be returned to the regular school as being a normal child, retained in the special school until the age of fourteen or sixteen, or dismissed from school altogether as being too defective to profit by special school instruction. No provision is made for the care of this latter class of children except in poor-houses.

The Lancashire and Cheshire Society for the Permanent Care of the Feeble-Minded was formed several years ago, largely through the efforts of Miss Denby of Manchester, a woman "who has devoted her life to the interests of the feeble-minded." This society has started at Sandlebridge a permanent home for feeble-minded boys and girls.

Special Schools in Austria-Hungary

The first auxiliary school in Austria was established at Vienna in 1885 with two classes. The school had,

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in March 1910, nine classes, and is the only auxiliary school in Vienna. Linz has a two-class school; Graz has two three-class schools, one for each of the sexes. Prague has five auxiliary schools (probably classes) with one hundred and sixteen pupils enrolled. Salzburg and Nachod have auxiliary classes. Connected with the auxiliary schools in Vienna is a protective bureau which keeps in touch with the pupils after they have left school and advises the parents as to situations for the children.

Hungary's first auxiliary school was opened in Budapest in 1900. In the beginning, the auxiliary school movement in Hungary was not without its opponents. It has, however, now proved its own worth and thus overcome opposition. The auxiliary school in Budapest is a state institution. It was installed in 1907 in a new building especially erected for the purpose. This building is probably the best auxiliary school building in the world. It has large, well lighted schoolrooms, two shower baths, play space on the roof, and a large yard. The building has eight classrooms with provision for one hundred and twenty to one hundred and thirty mentally deficient children. Director Eltes, who has charge of the school, is of the opinion that it is not well to bring together more children in one central building on account of the great distance they would have to come. The school had, in 1909, six graded classes with an enrollment of ninety-six pupils. The teaching corps consisted of a director, four male assistants, all specially trained for work with the mentally deficient and one female teacher in charge of the kindergarten. There is also connected with the school, a specialist in nervous diseases, an orthopedic physician and a specialist in diseases of the eye and ear. In connection with the school, is a day-home arranged for children whose parents are employed throughout

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the day. These children may remain at the school from seven o'clock in the morning until six in the evening. They are under the supervision of kindergarten teachers and are kept employed with games, singing, physical exercises, walks, stories, Froebelian occupations, and the like. Food is furnished these children free of charge. In 1907, a continuation school with three classes was arranged for pupils who had completed the auxiliary school course. The organization and the course of study are indorsed by the Minister of Education and attendance is compulsory for all feeble-minded children who are not continuing their education elsewhere. The school was attended in 1909 by about forty apprentices of the several trades and other lines of work.

The teaching corps of the school has formed, for the further assistance of the pupils who leave the school, an aid society which has received for distribution over four thousand crowns.

At this school a vacation course is given for teachers who wish to prepare themselves for teaching in the auxiliary schools. Those attending this course give in turn practical instruction to the pupils, under the supervision of the director of the school. They also hear lectures on psychopathology and child-study, on the physiology and training of the feeble-minded, and on the history, organization and methods of the auxiliary school.

The school has a library for the children. It has also a professional library for the teaching body, containing many pedagogical books both in the native and in foreign languages.

In this building the Imperial Physiological Laboratory has its quarters. The Director of this Laboratory, Dr. Paul Rauschburg, a well-known psychiatrist, is special physician to the auxiliary school. In founding this government auxiliary school the administrative

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officers wished to establish a model school. The city of Budapest has profited by the example and has established, in connection with the folk schools, fifteen auxiliary classes.

The cities of Szatmár, Eger, Csongrad, Kecskemet, and Debreczin all have auxiliary schools.

In 1910 it was reported that in Austria-Hungary there were 41 auxiliary schools with an enrollment of some 1,524 pupils.

Special Schools of Belgium

On May 1, 1897, an auxiliary school for boys was opened in Brussels, Belgium. This school was for boys who may be classed under the name (*anormaux pedagogique*) of pedagogically abnormal. In commenting on the establishment of this school, M. Léon Lepage says in his report to the Communal Council:

"These abnormal pupils were scattered by chance in classes corresponding to their ages and state of physical development, but it was to them an absolute impossibility to follow the same program of work as their normal mates and necessarily their presence in the class constituted a hindrance to the normal progression of the class studies, without taking into account the fact that they furnished a bad example to the other children.

"For these abnormal pupils the time passed in the classes under such conditions was totally wasted; they simply vegetated with no mental profit, acquiring little by little a distaste for school. Their minds instead of being set to work were rather dulled until finally the day arrived when their age forced them to quit school and they left to re-enforce the army of the inefficient."

Many attempts were made to better the condition of these unfortunates.

At first they were placed in lower classes where the program being much simpler in its demands seemed better fitted to their aptitudes. The experiment brought no result; the indolent natures and natural slowness of these children were vicious examples for their young classmates. It was necessary to abandon the attempt. Later came the idea of establishing for

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them classes for retarded pupils, with an abridged program of studies. Instruction was limited to reading, writing, and the most elementary rules of arithmetic. This attempt failed also, for this instruction, necessarily mechanical, only increased the mental sluggishness of these children.

"While we were seeking a solution of this important problem, several neighboring countries had likewise taken up a study of the question of abnormal children. These studies had shown the absolute necessity of establishing for such children special schools where they would receive instruction suited to their degree of development by the aid of specially adapted methods.

"It was from their example that we were inspired to propose the establishment of the school we now occupy."

The school opened with eight classes, enrolling two hundred and eighty-nine pupils, gathered from the regular schools of the city. The first care was to make out a program of studies which should reduce scientific and literary elements to the most extreme limits, in such a way as to make it possible to give the greatest importance to the other branches of study. The working time-table was laid out as follows:—

Weekly Hours, 29 3-4.

Physical Education	Recreation	3	1-3 hours
	Gymnastics	3	"
	Excursions	3	"
	Manual Work	2	1-4 "
Esthetic Education	Singing	1	1-2 "
	Drawing	1	1-2 "
	Geometric Drawing	1	"
Scientific Education	Mental and Written Arithmetic	4	"
	Metric System	1	"
	Inventional Geometry	1	"
Literary Civic and Moral Education	Reading and Story Telling	5	"
	Language	1	1-2 "
	Second Language	1	2-3 "

A second school was started in Antwerp in 1899.

There were, in 1907, in Brussels, twenty-one auxiliary classes for boys and thirteen for girls, with an enrollment of five hundred and forty and two hundred and thirty-nine, respectively.

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There is one independent auxiliary school for boys with eleven classes. The other special classes are combined with the regular folk schools. The maximum number of pupils for each class is about twenty. The direction of the classes is in the hands of the teachers. There is medical supervision for every class, furnished by a chief physician and three assistants.

There are also in Brussels special classes for children who are designated as "pedagogically retarded." Such children are backward because of bad environment, poor training, irregular school attendance, or sickness. They have no mental defect.

Dr. Ley reports in the *Handbuch der Heilpädagogik* that the best organized auxiliary school in Belgium is in Ghent, founded in 1904. The director of this school is a physician; the teaching force is made up of persons who have had special training in institutions for the mentally defective. There is a clinical laboratory in connection with it.

There are also auxiliary schools in Molenbeek, Saint Jean, and Anderlecht.

Nyms[1] says there are in Belgium 8,700 mentally defective children who are excluded from school and 80,000 pedagogically retarded children who do not find the ordinary school fitted to their needs.

There is in Belgium a society for the protection of abnormal children which has done much to bring about the proper care and education of these unfortunates. This society exercises supervision over the pupils after they have left the auxiliary school. In order to remain in constant touch with these children, the society has arranged for monthly conferences with them.

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[1] Article, L'Education des Enfants Anormaux. L'Enfance Anormale, Bulletin Trimestriel de la Société Protectrice de l'Enfance Anormale. Vol. 5, No. 3. Apr. 1911.

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Special Schools in Holland

In Holland the development of the auxiliary school system has been rather limited. In 1896 one class was formed in Rotterdam and a second in 1898. The maximum number of pupils for each class is fixed at twenty. New pupils are admitted to the class only once a year. In April, 1907, a four-class school for retarded pupils was established. A society of women has arranged a kind of outside care system, while another society provides the poor children with clothing and food and makes provision for them in vacation colonies. A four-class auxiliary school was established in Amsterdam in 1899, and in 1901 another school of the same type was started in another part of the city. The auxiliary schools in this city exercise a sort of care over the pupils after they leave, seeking, chiefly, to keep these pupils in orderly ways.

An auxiliary class was started as an experiment in The Hague in 1902, a second in 1903, while two more were established the following year. Other classes have since been established. The maximum number of pupils for each class is sixteen. In this city also there are school baths; food is furnished the poor children, and provision is made for them in vacation colonies. There is also an after care system.

By the law of 1903 the auxiliary schools of Holland are separated from the jurisdiction of the public schools and classed with the institutions for the feeble-minded. The selection of children for these schools is carried out in a way similar to that in Germany. Both sexes are taught in the same class. Special instruction in articulation is given such pupils as have defective speech. There is instruction in hand work for both sexes. All instruction is based on object teaching and every endeavor is made to correlate the several subjects of study and to relate them to practical life. All the auxiliary

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schools in Holland are under special supervision. The number of children in Holland who need special instruction in auxiliary schools is estimated at about one and one-half per cent. of the general school enrollment.

The Auxiliary Schools of France

Maennel in his "Auxiliary Schools in Germany," written in 1905, makes the statement that "in France they are not yet fully convinced of the great value of a general treatment for the weakly endowed children."

One is led to wonder at the slowness of the French in taking up this line of work. Binet, writing in *Eos*, in 1905, justly complained that the slowness of France in providing for her abnormal children is the more painful because Frenchmen were the first to formulate the principles for the training of abnormal children and the first to carry out experiments in this line. "The names of these pioneers, Itard, Esquirol, Bethomme, Ferrus, Falvert, Voisin and Seguin are regarded," says Binet, "as authorities everywhere except in France." Seguin, as we all know, was the first successful teacher of abnormal children and his book on the training of feeble-minded children is still a classic. France, however, has since waked up, passing in April, 1909, a law permitting the establishment of special schools for retarded children. This law, according to a German authority on auxiliary schools, Theodor Heller, places France at the head in regard to auxiliary school legislation. It has been thought best to present this law in full, as a study of its features may be helpful to those who wish to frame laws relating to the establishing of auxiliary schools.

THE FRENCH AUXILIARY SCHOOL LAW.

ARTICLE I.

"On the request of communes and departments there may be established for abnormal children of both sexes:

1. Auxiliary classes annexed to the regular elementary schools.

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2. Independent auxiliary schools with which may be connected a boarding school.

ARTICLE II.

The auxiliary classes shall receive children from six to thirteen years of age.

The auxiliary schools may extend the age of school attendance up to sixteen years, giving at the same time both school and trade instruction.

The pupils of the auxiliary classes who at the thirteenth year are found to be unable to learn a trade may be admitted to the auxiliary school.

Children whose cases are too serious for their education to be carried on in the home may be admitted to membership in the boarding school.

ARTICLE III.

To no auxiliary classes shall children of both sexes be admitted. The auxiliary schools may have under the same supervision two different divisions; a girls' division and a boys' division.

ARTICLE IV.

State aid for defraying expense of installation, of developing and extending such schools, will be apportioned according to the terms of Article VII of the Law of June 20, 1885.

ARTICLE V.

The ordinary expenses of the auxiliary schools and classes shall be borne by the communes and departments which establish them. Other communes and departments may contribute to the support of these schools. The expenses for instruction are charged to the state under the conditions provided for elementary and higher schools.

ARTICLE VI.

An auxiliary school of one commune may be established in the territory of another commune by mutual consent of the two communes.

ARTICLE VII.

The teaching body of the auxiliary schools and classes shall enjoy the same rights and privileges as the teaching body of the regular public schools.

Supervision of the boarding schools shall be assigned to them.

The directors shall be appointed by the Minister of Public Instruction. The class teachers shall be nominated by the inspector of the academy and appointed by the prefect. They shall be chosen preferably from candidates who have the diploma granted to those qualified to teach mentally deficient children. Supervisors of the boarding school shall be nominated by the principal and appointed by the prefect.

ARTICLE VIII.

In addition to the regular fees, the teaching force of the auxiliary schools and classes shall receive compensation or privileges by reason of extra work assigned to it.

Those teachers receiving a special diploma shall receive an extra stipend of 300 Fr. while they are connected with the auxiliary schools and classes.

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ARTICLE IX.

The ministerial decree ordering the establishment of an auxiliary school or class shall determine for each of these the special conditions of its organization as follows:

1. The maximum number of pupils to be admitted to each division.
2. The number of weekly periods of instruction, the length of the recitations and order of exercises each day.
3. The conditions under which teachers shall be assigned to the different classes and divisions of the institution.

ARTICLE X.

The boarding school may be administered directly by the commune or the department; or its management may be assigned to the director under an agreement by which the head of the institution assumes charge of it at his own risk.

These agreements are binding only after they have been approved by the Minister of Public Instruction, on the advice of the prefect. In the same manner agreements may be amended.

The maximum rates exacted from families and charity foundations for the cost of board and half-board in each institution shall be fixed by the Minister of Public Instruction on the proposal of the General or Municipal Council, according to the judgment of the prefect.

ARTICLE XI.

The auxiliary schools and classes shall be subject:

1. To the inspection carried out under the specifications provided by Article IX of the Law of October 30, 1886.
2. To a medical inspection provided by the commune or department establishing the school or class. Every child shall be examined at least once each half year. These observations shall be recorded on an individual Health Record blank.

ARTICLE XII.

A committee consisting of the school inspector, and the director or a teacher of the auxiliary school, and of a physician shall determine what children shall be admitted or retained at the school and whether they shall be assigned to an auxiliary class or to an auxiliary school in case they are so defective as to be beyond instruction in the home.

A member of the child's family shall always be invited to be present at the examination.

ARTICLE XIII.

A Committee of Patrons shall be connected with every auxiliary school. The members shall be appointed by the Minister of Public Instruction with the advice of the prefect. Women must form a part of the membership. A committee of administration appointed by the Municipal Council or the General Council, shall be placed over each auxiliary school. On this Council there shall always be a representative of the Minister of Public Instruction, a representative of the prefect of the department in which the school is situated, and at least one physician.

ARTICLE XIV.

Decrees and resolutions passed with the advice of the Superior Council of Public Instruction shall determine the character of the program of instruction and the conditions under which the special certificate may be obtained.

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ARTICLE XV.

There will be determined by special decision the conditions under which:

1. The assistant teachers, the supervisors and the master mechanics employed in the auxiliary schools shall be paid.
2. The compulsory participation of those appointed to the auxiliary schools in old age insurance.

ARTICLE XVI.

The aforesaid conditions in regard to State aid for the construction of auxiliary schools and for the recruiting of the teaching force, apply to institutions for the deaf and the blind, subject wholly to the Minister of the Interior.

There were, in 1909, five auxiliary schools in Paris and two in Bordeaux. The auxiliary schools in Bordeaux are excellently equipped and an attempt has been made to make them the very best, profiting by the experience of Belgium and Germany. An excellent study of these schools by M. Rotgès appears in the January and February numbers of the French magazine "*L' Enfant*" for the year 1909.

Scotland

In Scotland there are special schools in Edinburg, Glasgow and Govan. These special schools, according to the report of the Glasgow School Board, are provided for those children who because of mental or physical defect are unable to pursue with profit the instruction of the regular schools. In 1908 there were nineteen special school centers. In some of these centers provision is made for teaching both the mentally and the physically defective children. In other centers only one class of children is taught.

In 1908 these schools had an enrollment of seven hundred and seventy pupils with seventy-six teachers and eleven nurses.

Switzerland

The first step towards founding an auxiliary school was taken in Basel in 1889. Several arrangements for

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the purpose of aiding feeble-minded pupils in their studies were in existence somewhat earlier, for example, in Chur, from 1881 on.

The auxiliary schools in Switzerland, in consequence of the relatively small population of the different cities, are mostly one-class schools, and they are called "special classes."

In 1907 there were twenty-nine cities that maintained auxiliary classes. These classes numbered sixty-seven with an enrollment of some 1,415 pupils. Zurich had the largest number, 15 classes with 358 pupils, while Geneva had nine classes with one hundred and sixty-five children. In 1909 there were in Switzerland 80 auxiliary classes, enrolling some 1,700 pupils.

Denmark

Denmark's first auxiliary classes were established in Copenhagen, in 1900. There are no independent auxiliary schools. Three classes were then established and the next year three more were formed. In 1907 there were thirteen classes with an attendance of some fifteen to twenty pupils for each class. There are also auxiliary classes in the cities of Fredericksborg, Aarhuus, and Aalborg.

Norway

The largest auxiliary school in Norway is at Christiania. The establishing of such schools was made permissible in the folk school law of 1889.

The school at Christiania is quartered in two buildings. It had, in 1909, forty-two classes enrolling six hundred and seventy children. There are seven grades, with several parallel classes. There is an auxiliary school at Bergen and one at Drontheim. Kristianssund, Stavanger and Tromsoe have auxiliary classes. Children are assigned to these schools after one year of

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unsuccessful work in the folk schools. Children known to be mentally deficient may be admitted directly to the auxiliary school.

Sweden

The first auxiliary classes in Sweden were formed in 1905. Previous to the formation of these classes a census was taken of the mentally deficient children of school age in the city of Stockholm. This census showed that 0.35% of the school population were idiots, and 1.88% were mentally retarded (*Zurückgebliebene*). The auxiliary classes are connected with the regular schools. The number of pupils in these classes does not exceed twelve.

Children are assigned to the auxiliary classes who have attended the classes of the folk schools from one to three years without success. The hours of the school day are from nine o'clock in the morning to one in the afternoon, with adequate intermissions. Special material is provided for object teaching. Only women are employed as teachers.

In 1906, there were in Stockholm six classes with sixty-four pupils. There were auxiliary classes in Gottenborg, Malmo, Helsingborg, Gefle, and Upsala.

The assignment of pupils to the auxiliary classes takes place upon the request of the teacher of the regular school after a medical examination of the child has been made. Still the teacher of the auxiliary class has a right to reject any child that appears to him not fitted for the school. Milk and warm lunches are furnished to needy children.

Russia, Italy, and Australia

Russia and Italy have no auxiliary schools.

Australia has a kind of auxiliary school organization in the form of special classes in the cities of Melbourne and Sidney.

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Chapter Three

THE DEVELOPMENT OF SPECIAL SCHOOLS AND CLASSES IN THE UNITED STATES

Providence, Rhode Island, is generally given the credit for having established, in 1893, the first "Special Class" in the United States. Dr. L. R. Klemm is, however, authority for the statement that the first school of the kind was established in Cleveland, Ohio, in 1875, by Superintendent A. J. Rickoff. It is a fact, however, that the establishment of nearly all the special schools in the United States has occurred within the last fifteen years and the great majority of them are from three to five years old. While we are not so far behind Germany in recognizing the need for establishing such schools as some writers would have us believe, we are, nevertheless, far behind in really meeting this need. Undoubtedly, the strict compulsory attendance laws of Germany are responsible to a large extent for the more general establishment of such schools. These mentally deficient children had to be kept in school. They could make no progress in the regular schools, hence special schools had to be provided for them. The lax compulsory attendance laws of America have made it possible to neglect this class of specially needy children. They were either not sent to school at all or when sent they were often dismissed by the teachers as too stupid to be benefited by school instruction. The stricter enforcement of the compulsory laws in several of the more progressive states, especially in the larger cities, has brought the needs of these children

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to the attention of the authorities, and their needs are now being slowly met.

Special Classes in New York City

The system of Special Classes has been, as we have already seen, rather fully developed in New York City. There are four types of special classes, called C. D. E. and the Ungraded classes. To the C. classes are assigned the pupils who cannot speak English and they are given special drills in language and removed to a regular grade as soon as they have acquired enough proficiency in English to be able to carry on the work of the regular grade. The D. classes are for those pupils who are almost fourteen years old (the age at which pupils may leave school to go to work in New York) and who wish to go to work as soon as the age limit is reached. In the D. classes such pupils are given instruction in the essential subjects to enable them to meet the requirements in scholarship which they would not be able to do should they remain in the regular grades. The E. classes are for over-age pupils. By special instruction these pupils are encouraged and helped to skip or gain one or more grades.

The classes just described are in addition to the ungraded classes for mentally defective pupils. These ungraded classes became part of the public school system of New York City in 1899. In Germany, the mother land of special schools, and in England, the mentally defective children are segregated in special school centers. Several cities in the United States have followed this plan, but New York City makes the special class a part of the regular school and the children of this class are encouraged to associate and play with their normal mates to the end that the mentally defective child may grow up as far as possible in the environment in which he is to live later.

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The Department of Ungraded Classes was organized in 1906-7 under the direction of Miss Elizabeth Farrell, who was the teacher of the original class for mental defectives established in 1899. It is estimated that there are approximately 7,000 mentally defective children in the schools of New York City. Of this number about 1,700 were, in 1909, enrolled in some one hundred classes. In 1907 Dr. Isabelle Thompson Smart was appointed physician to the Ungraded Classes.

The procedure for admitting a child to the Ungraded Class is as follows:

In September and February the principals of the schools report to the inspector of the ungraded classes, on application forms (Form A), such pupils as are candidates for admission to the ungraded classes. As soon as possible after the receipt of these applications, the special physician examines the children either at the schools they are attending, or at her office at the Board of Education building. The data obtained in these examinations are recorded in duplicate on the medical examination blank (Form F)[1]. The children are also subjected to a pedagogical test by the Inspector. If, in the judgment of the special physician and the inspector, a child is thought to be mentally deficient, he is assigned to the ungraded class nearest his home. As yet (1910), according to the inspector, no satisfactory mental tests have been found.

When, as the result of her examination, the special physician finds defects of eye, ear, nose, teeth, or throat, which demand medical or surgical treatment, she makes recommendations to the parents, suggesting treatment by the family physicians where the parents are able to pay for treatment, or at clinics, or dispensaries, in case the parents have not sufficient means to pay for treatment.

[1] For these blank forms, see Appendix.

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Children in the Ungraded Classes are treated as individuals. The physician re-examines all the pupils in these classes once each half-year, giving advice and suggestions to the teachers or parents as to further or neglected treatment. The data of these re-examinations are recorded in duplicate forms (Form G). One of these forms is retained at the school and the other is placed on file at the department office.

The teacher records the school progress of the child four times a year in duplicate on a special card (Form H), one of which is retained in the room, the other being sent to the inspector's office.

The subject matter of the course of study for the Ungraded Classes is made as practical as possible, the aim being to lead the pupils to become proficient in some line of industrial work, such as basketry, chair caning, sewing, dressmaking, carpentry and the like. Work along those lines is not well organized in the Ungraded Classes, but a beginning has been made. In addition to this work, the essentials of reading, spelling, writing, and the simple numerical operations are taught. This work, too, is made very concrete, objects being constantly employed, as abstract work is almost an impossibility to the mentally deficient child.

New York, then, has special classes rather than special schools for mental defectives. The reasons given for this plan of organization are that it is more flexible, more easily established and better adapted "to the general education system of the city."

The size of each class is limited to an enrollment of twenty with an average attendance of fifteen. One or two classes, rarely more, are established in connection with some regular public school. The term "ungraded class" is used to avoid opprobrium. The term, "mental defective" is avoided. The "classes are con-

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sidered as special coaching classes, from which the child may be returned or promoted to the grades, if capable of being coached up to grade standards. This is necessary because there are so many grades of aments and some of the higher types are practically indistinguishable from the worst cases of retardation due to neglect and malnutrition."

It is the practice in Germany, England, France, and in certain cities in America to have the auxiliary schools in separate buildings apart from the regular school classes. Careful thought will, it seems to me, reveal the wisdom of this practice. These children are usually peculiar, different from their normal mates, and the inherent, unconscious cruelty of the ordinary boy and girl leads them to hector and annoy those less fortunately endowed mentally than themselves. In a great many places the children in the special classes are known to their mates as "crazies." A teacher of a special class in a large city school told the writer that he never took his children to the morning assemblies because of the glances and whispered gibes that were sure to greet them. The very fact that defective children need special treatment in regard to recreation, physical training, and manual work, militates against their proper teaching in the regular public schools. Of course there are educators who take the other side of the question. The following statement of the other side by such a well-known educator as Associate Superintendent A. W. Edson of New York City is worthy of consideration. We think, however, that he takes too optimistic a view of the good that will come from the association of normal and subnormal.

"The reason for having these children in a public school and yet in a class or group by themselves, is that they may be a part of the school and yet be where they may receive special instruction. In their journeys to and from home, in some of the general exercises of the school, and for a portion of the time on the playgrounds, they may and should

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participate with normal children, but in ordinary class work it is to their advantage to be in a class by themselves. Here they will receive individual attention; each child will receive instruction specially adapted to his needs; medical treatment will be provided or prescribed to meet the needs of the individual child. Only those children who are capable of intellectual improvement should be sent to the public school."

One is led to believe that the argument in favor of having mentally deficient pupils associate with their normal fellows for the sake of the socializing effect has been over-drawn in New York. One is inclined to believe that while the system of ungraded classes in New York City is doing great good, it will, nevertheless, in the not distant future be discarded for the system which provides special school buildings, specially equipped, as educational centers for mentally deficient children.

Special Classes in Philadelphia

The system of special schools and classes in Philadelphia is about ten years old. During this time ten special schools have been established besides a few special classes in the regular schools. The disciplinary classes and the auxiliary classes are housed in the same buildings. The tendency now is, however, to discard the special buildings and place the special schools in the regular school buildings. This, in view of the experience of all countries, seems to be a step in the wrong direction. It may be advisable from the point of economy, but it is certainly not from the point of view of pedagogy. This plan of discontinuing the special school centers will not, however, be a serious evil if Philadelphia succeeds in carrying out the plan of having only backward pupils in the special classes, the really mentally defective pupils being placed in institutions. This, as has been said elsewhere in this study, is what should be done if society is to deal properly with the feeble-minded child.

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A census of the number of mental defectives and backward children in the public schools of Philadelphia was taken in February, 1909, by a Committee on Special Education of the Philadelphia Teachers Association.

This census and a study of the inferences to be drawn from it, together with suggestions as to proper methods for dealing with the backward and mentally defective children of Philadelphia are published in Document No. 3 of the Philadelphia Teachers Association. This census was taken by the principals of the several schools under the direction of the Bureau of Health, Dr. Walter S. Cornell being detailed by the Bureau of Health to assist in the investigation. The basis of classification for the census can be judged from the following quotation from the letter addressed to the principals:—

"For the purpose of this investigation the children under consideration may be divided into five classes:

"1. Feeble-minded children who should be under institutional care.

"2. Incorrigible, truant, or vicious children *who are* also defective mentally and who should be segregated in special schools.

"3. Incorrigible, truant, or vicious children of practically normal mentality who should be segregated in special schools.

"4. Backward children who require special educational methods in special classes or schools.

"5. Dull children who may be taught in small or special classes but who, nevertheless, do not absolutely require such provision.

"It is understood, of course, that the judgment of the teacher and principal, or the diagnosis of the medical inspector, if his assistance be enlisted in the collection of the data, is unofficial and carries with it no responsibility to maintain it."

The census showed that out of 157,762 children in the public schools there were 4,940 children who came under classes 1, 2, 3, and 4 above enumerated and who needed special treatment. The above figures represent three and one-tenth per cent. of the total school enrollment. Of those pupils, 687 were in the grammar grades, making one and three-tenths per cent. of the total enrollment of the four upper grades; 4,253

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were in the four lower grades making three and nine-tenths per cent. of the total enrollment of these grades. Under Class 5, 6,603 pupils, 3,362 boys and 3,241 girls, were enumerated as dull, being four and two-tenths per cent. of the total enrollment.

The census of the two special schools showed that out of the 881 pupils enrolled 51 were feeble-minded children who should have been enrolled in institutions; 538 were incorrigible, truant, and vicious children, 155 of them being reported as of low mentality; 213 children were reported as backward who should be in special classes apart from the incorrigibles and truants.

It is not clear from this report just how the degree of mental ability of the different classes of children was ascertained. On the basis of estimates, there should be among Philadelphia's 157,762 school children from 1,400 to 1,600 mentally defective children instead of the 442 enumerated. This 1,400 or 1,600 would not include the children in the disciplinary schools, although, doubtless, the early placing in auxiliary schools of many of the children who now come to the disciplinary schools, would render these children tractable and save trouble both for them and for the schools.

The line of work laid out in Philadelphia is to provide auxiliary classes for the backward children in connection with the regular schools. As we have already stated elsewhere the establishment of special classes for mentally deficient pupils in connection with the regular schools has not proved the best method of dealing with such children in those places which have had most experience in dealing with this class of children. It would seem that many of the children who are classed in the Philadelphia report as "backward" are really mentally defective and that the proper place for them is in separate special schools. Philadelphia's aim to place the really mentally defective children in

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custodial institutions is a laudable one, but the number of feeble-minded which the report gives as found among 157,762 school children would appear far too small.

The report also emphasizes the point that one of the first conditions for success in dealing with special schools and classes is a supply of specially trained teachers, and supervisors. The report ventures the hope that, eventually, normal schools will give courses that will fit teachers to take charge of classes of mentally deficient pupils.

Special Schools in St. Louis

In his report for 1907 the late Superintendent Louis W. Soldan of St. Louis discussed at length the need of establishing special or auxiliary schools for children of defective mentality. He advocated the establishment of some seven two-class schools in rented dwelling houses in different parts of the city.

These schools, he said, should be no mere makeshifts. The teachers should be specially qualified and should be such as would exert a strong personal influence on the pupils, preserving, most of all, the mother attitude which would lead them to take an affectionate interest in every afflicted child. Each school should be in charge of a woman care-taker who would also act as helper to the teachers in caring for the children.

A special supervisor should be appointed for these schools. Free transportation should be furnished children coming from beyond a reasonable walking distance.

Superintendent Soldan discusses the admission of pupils to these schools in the following paragraph:

"Great care will be taken in admitting children to these special schools. The *backward* or slow child of otherwise normal faculties should not be taken away from the regular school to which he belongs, and care must be taken to limit admission to those children who are mentally defective and *not merely slow*. On the other hand imbecile

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or demented children who cannot profit by school instruction at all should not be admitted, because they are not amenable to the ordinary educational influences. The home or the asylum is the proper place for those unfortunates. The admission of children to the special schools should be in the hands of principal and teacher who make the recommendation, and the supervisor of defective schools, whose indorsement should be subject to the approval of the Superintendent of Instruction."

In addition to this an expert physician should examine each case.

The last work that Superintendent Soldan ever did was on the course of study for these special schools.

The program for these schools, according to Superintendent Soldan, should be flexible but definite. The teacher should carefully plan her lessons. Children should be grouped for work and frequently reclassified. The small number of children to a teacher will make individual teaching possible.

Subjects: Singing is of mental and physical importance; it expands the lungs and develops the vocal organs and has a good effect on the emotional life of the child. Piano music will be an aid in marching and in the physical exercises. Great attention should be paid to spoken language and the children should be encouraged in every way to talk about things. In the conversation lessons the teachers should keep careful watch to see if the children are interested. There should be memorizing of simple poems. The work in reading and spelling should be adapted to the abilities of the children and reading lessons should be frequently acted out. There should be work in paper cutting, drawing and writing. General information talks should be emphasized. Very likely Superintendent Soldan would have added certain work along the lines of manual training for the boys, and domestic science for the girls, but the course of study was lying unfinished on his desk when he was stricken by sudden death.

The schools advocated by Superintendent Soldan were established the following year under the special

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supervision of Mrs. Cunningham. The following quotation from her report concerning the work is of interest.

"In our effort to help our charges, we have endeavored to reach them in a different manner from that pursued with the normal child. These defective children have been in the grades two, three, four, and some as many as six or seven years. Efforts to teach them to make simple arithmetical calculations have failed, under most skillful handling. The children have become discouraged. They have acquired a distaste for these subjects. Our aim was to interest them in these things when they were ready for them. They were taught number through the manual training work, through the improvised steel and toy money, the measures, the clock face, the games and other concrete material. The reading is helped and language as well by excursions to parks, markets, and stores. The child upon his return has some ideas that he is anxious to communicate to others.

"Hand work and particularly manual training we found of great importance. It was sometimes surprising to see the boy who labored patiently with a simple little problem in numbers take up his saw and plane and forthwith become apparently regenerated. He was a new boy; his intellect did not lag even when signs of physical fatigue became but too evident. The defective boy or girl is happiest when he or she is making something, be it good or bad when finished. Success has been achieved through the effort to make something.

"Our work is as yet new to us; we are not all agreed as to which is the defective and which is the backward child: we are not sure as to what is exactly the proper treatment of the backward child when we have defined him. But we are convinced that opportunities for psychological research are present on every side. The teacher in this work comes to realize that a proper valuation of the abnormal child aids in the development of the normal. And thus I hope the study of and the desire to help these poor unfortunate members of our community may be a true help to the strong as well."

There is a special medical adviser connected with the schools and all children proposed for admission are examined with great care to prevent sending to these schools such children as should remain in the regular schools. The cost of these schools is $130.00 per year per pupil, for teachers, books, supplies, incidentals, and rent.

Of the success of these schools, Superintendent Blewett said in an address before the National Educational Association, "At the end of a year and a half of experience we know very definitely that we have helped most of the pupils to a happier, healthier life."

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Special Classes in Baltimore, Md.

The city of Baltimore reports two classes for epileptic children, two for mental defectives, and nineteen classes for backward children.

Baltimore was the first city in the United States to establish special classes for epileptic children. These two classes have (1910) a membership of only eight or ten pupils each, it being found difficult to persuade parents to send their epileptic children to these schools. It is probable that the Board of Education of Baltimore will bring the membership of these schools up to twelve or fifteen by allowing mentally deficient children to be admitted to them, although the wisdom if not the economy of this plan may well be questioned. According to some authorities, however, the fits or spells of the epileptics do not disturb mentally deficient children as they do normal children, hence the mentally deficient and the epileptic may be taught in the same class.

As can be seen from the number of classes reported, no adequate provision is made for the instruction of mentally deficient pupils in Baltimore.

Arrangements have been made whereby pupils who are thought by the teachers to be mentally deficient may be examined at a clinic established at Johns Hopkins under the Phipps Donation.

The classes for backward children as arranged at School No. 20 at Baltimore resemble very much the so-called "furthering classes" of the Mannheim system.

Special Classes in Washington, D. C.

Much has been done in the last few years to develop the special class system in Washington, D. C. The schools for the mentally defective pupils are in rented dwelling houses. While these houses have, of course, not all that could be wished for in the way of

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appointments for school needs, yet they serve the purpose for which they are intended very well and the pupils are much better off in these school buildings than they would be if assigned to quarters in one of the large public school buildings. Nearly all of the centers are equipped with special rooms for manual training and domestic science, the equipment along these lines being the best that the writer has observed in his visits to the special schools of several cities. It has been found in Washington that the children of both the auxiliary classes and the disciplinary classes are very much interested in learning to use the typewriter. The development of the muscles of the fingers brought about by practice on these machines is thought to have a direct effect on the mental development of the child. A great many typewriters have been supplied to the special schools and a special supervisor of typewriting has general supervision of the work. The teachers of the schools are very enthusiastic over the benefit the children have derived from this work. It would seem as if Washington had discovered a valuable means in the typewriter for training the mentally defective child.

Special Classes in Providence, R. I.

The first public day schools for mentally deficient children in the United States, according to most writers on the subject, were started in Providence, Rhode Island, in December, 1896. A second class was opened in December, 1897, and a third in the same month in the following year. They are called "schools for backward children." The number of these classes has not increased since 1898. The membership of each class averages about fifteen pupils. The ages of the pupils vary from seven to fourteen years. The largest number of the pupils are classified as doing the work of the first or lowest primary grade. In 1909, out of a total en-

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rollment of forty-one in the three schools, twenty-seven were in the first grade, six in the second grade, six in the third and only two in the fourth.

These schools are under the special supervision of the director of kindergartens. Some attempt is made to have the children entering these classes examined by a specialist in mental diseases, yet these examinations do not seem to have been conducted in such a way that the data obtained is available for the guidance of the class teacher. It would appear that a system of blanks similar to those in use in the ungraded classes in New York City would be helpful in making the data obtained in the examinations of use to the class teacher.

The director reports that the teachers of these special classes derived help during the year 1909 from a discussion of Maennel's "The Auxiliary Schools of Germany" in their teachers' meetings. These schools are housed in special buildings, there being usually one or more disciplinary classes in the same building with the special class. Some hand work, basketry, weaving, simple woodwork and the like is done by the children. The equipment for this work is meagre. The work along the line of muscular training seems poorly developed. In fact, although Providence was the first city to inaugurate the special school movement in the United States, her work in this direction is far behind that of several other cities.

Special Classes in Boston, Massachusetts

The special classes for mental defectives in Boston were organized in 1898. The first class work began in January, 1899. These classes are held, as a rule, in the public school buildings. The sessions of these schools are from nine to one o'clock. The class membership is limited to fifteen.

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A child who is thought a fit case for a special class is reported to the physician in charge of these classes. The teacher of the special class nearest the home of the child visits the parents of the child and seeks to persuade them to allow the child to attend the special school. If they are willing, the child is admitted to the class for a probationary period of a few weeks during which time the teacher closely observes his mental and physical condition. At the end of this period she makes a report to the physician as to whether she thinks the child should remain in the special class, be sent to an institution, or returned to the regular school. The physician then gives the child a careful examination, usually confirming the opinion of the teacher, but his disposition of the case is final.

The teachers of the special classes must all have experience in teaching feeble-minded before they can be employed in the special classes. It is not too much to say that Boston has some excellent teachers in her special classes.

The classrooms of the special classes are each equipped with three manual training benches. The last hour of the school day is spent in manual work, the larger girls and boys working at the benches, while the smaller children have work in weaving, sewing, knife work, clay modelling and work along similar lines. Physical development is emphasized. Each teacher keeps a careful record of all the children. Boston has no after care committee and thus there is no means of knowing what has become of the children who have left the school during the past ten years. The specialist in charge of the schools, Dr. Jelly, has the right idea as to what children should be placed in the special classes. Only the tractable feeble-minded children are admitted. Imbeciles, both moral and mental, are excluded. There are only eight special

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classes in Boston. This number should, of course, be increased several fold in order to take adequate care of the feeble-minded children among Boston's school population. The work also needs to be more carefully organized with a specially qualified supervisor in charge.

Special or auxiliary classes have been organized in many cities throughout the country. The work is new and crude, but the need of these classes is being recognized and their adequate organization will slowly, perhaps, but surely follow.

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Chapter Four

WHY THE AUXILIARY SCHOOL IS NEEDED

It is plain to be seen that children who are mentally defective cannot be kept in the regular classes of the public schools. Such a procedure is unjust to them, for they receive little benefit for the time so spent; it is unjust to the normal pupils, for they are deprived of the time which the teacher must devote in undue amount to fruitless attempts to teach the abnormal child. It is furthermore unjust to the regular class teacher to expect her to teach and control children so exceptional in their mental development as to require specially trained teachers to effectively instruct them.

The *laissez faire* method of free education has been developing a large body of feeble-minded left-overs as the result of its attempt to treat all children alike. These children have grown up and married and in many cases their feeble-minded progeny are now the misfits in the educational scheme of mass methods. But society has slowly been waking up to the fact that it must protect itself from its own unwise endeavors to educate its members by the process of elimination. It has come face to face with the fact that it must, for its own protection, either educate all its members up to the measure of self-support or else furnish custodial care for those who are not self-supporting. The auxiliary school has arisen as a means of helping society to solve this problem.

Undoubtedly, the time will come when the great majority of children who are now considered fit candi-

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dates for the special class will be assigned, at least after they have reached adolescent years, to custodial homes.

It may be that the option will be given to parents of choosing between having their feeble-minded offspring asexualized and allowed to remain at home or sent to a custodial home.

Havelock Ellis[1] writes in the *Eugenics Review:* "Sterilization of men can be effectively achieved by simple vasectomy, or section of the vas deferens, and of women by the almost equally simple and harmless method of ligature of the Fallopian tubes (Kehrer's method as advocated by Kisch). It would appear that both these operations may be effected by skilled hands in a few minutes with a minimum of pain and inconvenience and they possess the immense advantage that the sexual glands are preserved, and no organs removed from the body. No doubt, it may be said, the necessity for seclusion in the absence of sterilization would exert a gentle but firm pressure in emphasizing the advantages of the operation. There need be no objection to that.

"It is probable, also, that the method of sterilization by X-rays may some day acquire practical importance. In this case there is no operation at all, though the effects do not last for more than a few years. This might be an advantage in some cases."

Society is only beginning to arouse itself to the seriousness of this great problem. In fact, even the great majority of physicians have not the knowledge that would enable them to sense the menace of the feeble-minded to the community.

Johnstone has stated that most of our states are now spending from a quarter to a third of their revenues to support penal and charitable institutions. The bur-

[1] The Sterilization of the Unfit. The Eugenics Review, October 1909, pp. 204-5.

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den is great, but it will be greater unless efforts are put forth to stop the sources from which these institutions are fed. The feeble-minded, we are just beginning to learn, furnish one of the chief of these sources. Paupers and criminals are sure to be prolifically bred, wherever the mentally defective are allowed to go untrained and unsupervised either by after care committees or, preferably, in custodial homes.

The special school is one of the most important preventive agencies. By its means, when it becomes generally established, a census can be made of the mental and moral defectives in the community. Through it these children can be classified and the worst cases can be sent immediately to custodial homes; the majority may be trained to intelligent habits of self-control and work and given the rudiments of a moral, æsthetic and intellectual education.

Goddard found three per cent. of the children enrolled in a certain city school system which he investigated were four years or more below the mental level corresponding to their age. "These pupils," says Goddard, "are feeble-minded. It is unfair to normal children to keep these mentally defective children in the regular classes. They should be segregated and given a special teacher who understands their case and is allowed to train them as their mental condition will permit. Of course, ultimately, they ought all to go to the institutions for the feeble-minded where they will be cared for and prevented from contaminating society; but until this can be done, the special class for defectives is probably the wisest solution."

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Chapter Five

CHILDREN WHO MAY APPEAR AS CANDIDATES FOR MEMBERSHIP IN AUXILIARY SCHOOLS OR CLASSES

Morons, Imbeciles and Idiots

The membership of auxiliary classes and schools should be made up of children between the ages of six and sixteen who are so markedly abnormal or subnormal that they cannot profit by the instruction given to normal children. These children stand midway between the normal "dullard" and the imbecile. This class is defined in the English Defective and Epileptic Children Act of 1899 as those children who "not being merely dull and backward, are defective, that is to say, by reason of mental (or physical) defect are incapable of receiving proper benefit from the instruction in the ordinary public elementary schools, but are not incapable by reason of such defect of receiving benefit from instruction in such special classes and schools as are in this Act mentioned."

Such children represent those afflicted with the mildest or feeble-minded grade of amentia and would in general be given the name, recently coined, of *morons*, (derived from the Greek word meaning to be foolish). Such a person when mature is, according to the Act just mentioned, "capable of earning a living under favorable circumstances, but incapable from mental defect existing from birth or from an early age, (a) of competing on equal terms with his normal

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fellows, or (b) of managing himself and his affairs with ordinary prudence." Morons may be classified as low, middle, and high grade, representing in mental age a range from seven to twelve years.

Imbeciles represent the next lower grade of mental defect and are defined by this Act as "those persons who, by reason of mental defect existing from birth or from an early age, are incapable of earning their own living, but are capable of guarding themselves against common physical dangers."

The imbecile does not generally know the names of common objects and can give no account of their uses, neither can he recognize and name things represented in pictures. His speech generally shows little intelligence. He often cannot be trusted to execute the simplest commands. An imbecile boy who was sweeping off a sidewalk against the wind complained because the wind blew the dirt back on the walk. He had not common sense enough to see that if he swept from the other side of the walk the wind would help take the dirt away. This lack of common sense is the most marked characteristic of the imbecile. Imbeciles may be of low, middle, or high grade of defective and represent a range of mentality corresponding to that of normal children from three to seven years of age.

The idiot represents the lowest grade of amentia, or feeble-mindedness, and is so defective "that he is unable to guard himself against common physical dangers." Idiots are classified in three grades similar to morons and imbeciles. Their range of mentality does not exceed that of a two year old child.

Dull and Backward Children

The special or auxiliary schools and classes as organized and carried on in Germany, France and

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England are for mentally defective, abnormal or, as some writers have chosen to call them, subnormal children. The merely "dull and backward" children have no permanent place in such classes. Such children are normal. In many cases their intellectual gifts are extremely meager; in others intellectual development has been retarded through neglect or sickness.

Tredgold[1] states that in some parts of Somersetshire, England, "dull and backward" children constituted five per cent. of the school population; in other parts as high as fifteen or twenty per cent. According to him, there are two classes of such children: (1) those who are dull only in their school studies and (2) those whose dullness extends to all the mental faculties. The former class are, as a rule, readily distinguished; but in the latter, diagnosis may be a matter of much difficulty.

(1) Tredgold[2] cites as examples of dull and backward children of the first class two brothers, ten and twelve years of age, who were referred to him for examination by the teacher of a large country school. They were both pupils of Standard II and the examination showed they were not capable of doing the work. They had, however, "a very good knowledge of many details of country and farm life—of the cows, the corn, and the bird nesting"; and "they were by no means backward on the playground. In fact, I had little difficulty in demonstrating to the teacher that, although these boys could hardly do the simplest sum and could only read and write words of one syllable, yet they had plenty of common sense, and were by no means mentally deficient."

According to Tredgold, such dullness runs in families. Children of this type "cannot or will not"

[1] Mental Deficiency, p. 141.
[2] Mental Deficiency, p. 141.

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(Tredgold thinks it is a little of each) "make progress in the school studies, yet in play or in the streets they are keenly intelligent."

It is a mistake to regard such children as even mildly defective as would some observers. Their family inheritance has no taint; they are physically well developed, and able to hold their own with the average child in everything but book-knowledge. They are, therefore, not defective but only retarded in the development of certain of their mental faculties, a condition due to the humdrum manner of life of generations of ancestors.

Inability to advance in school work is not necessarily an indication of mental defect in Dr. Tredgold's opinion. He would thus be averse to accepting the dictum of Binet and Simon as promulgated in this country by Dr. Goddard that a child who is three years behind the normal age of the school grade in which he is enrolled may be regarded as mentally defective. In fact, as we have said elsewhere, Dr. Tredgold thinks that many of the children now enrolled in the English special schools belong to this class of "dull and backward" children. He cautions medical examiners, therefore, not to give too much weight in their diagnosis of candidates for special classes to school records.

(2) The children just considered are dull only in school work. There are other children who are dull in both work and play; their stupidity pervades every thing that they do. Yet even these children are, according to Tredgold, not suffering from mental defect. The defect is not pathological but physiological. These constitute the perplexing cases for the medical examiners to decide.

Certain things will help in this decision. If the family history reveals pronounced morbid heredity, the case is probably one of real mental defect. A

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thorough examination of the child for stigmata of degeneracy and abnormal nerve signs is important. These are not generally found in the dull and backward. Such children are generally well nourished and of good physical development in contrast to the real defectives who in most cases are undersized, thin and poorly nourished. But most important of all is the mental examination. If in this examination the child reveals a good knowledge of the common things about him, and shows good common sense in his answers to questions as to what he would do under different circumstances that he would meet in the common walks of life, he has probably sufficient mental ability to follow some line of work with fair success and to look after his interests with ordinary foresight. If this is the case, he is not mentally defective.

Children of Retarded Mental Development

Tredgold calls attention to a group of children whose mental development is only temporarily retarded. Children in this condition are found oftener in towns and cities than in the country and their condition is so like that of real mental defect "that for a time diagnosis may be impossible." This temporary retardation may be caused by improper or insufficient food, by lack of pure air or warmth, and by the general conditions of neglect which are so common in the densely populated industrial centers.

As Tredgold says, "In real mental defect it is the seed that is blighted, while in the condition we are considering it is the soil that is unfertile. The condition may not be inaptly compared to the late opening of the flower-buds in consequence of chill winds and absent sun. It may be described as a late spring, and the characteristic of these cases is that under more congenial surroundings, the brain rapidly recovers, and the

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child soon regains the normal standard. These children often experience a very sudden mental awakening to the surprise of everyone about them. Such children may be placed temporarily in a special school in order to be given the individual attention that they need, but their condition should never be confounded with that of the real mental defective."

As has been said, these cases are sometimes extremely difficult to distinguish from those of real mental defect, and it is only by placing them in the special school that a decision is sometimes at all possible. Tredgold is of the opinion "if the examination reveals an entire absence of morbid inheritance, if there are no stigmata of degeneracy nor signs of irregular nerve action, and if the state of nutrition is poor and the environment is known to be bad, that then there are grounds for suspecting that the case is one, not of arrested, but of retarded development, and the diagnosis must be provisional."

Dullness caused by Disease

Children may be dull through lack of vitality and nervous energy, due to disease. Such children are often mistaken by teachers for mental defectives. Defects of eye, of ear, or of the speech organs may be responsible for the dullness of the child; physical and mental energy may be sapped by tuberculosis. There is also the child who may be dull because of extreme nervous exhaustion. Such a child is listless and inattentive, is loath to answer questions, fails on simple sums in arithmetic. His memory is poor, co-ordination imperfect, and he may be subject to tremor. "His head may be small and asymmetrical and his lower eyelids are baggy and relaxed."

An investigation will reveal the fact that the dullness is comparatively recent and that the child previous-

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ly may have been of ordinary or of more than ordinary mental ability. In such cases the child is probably suffering from neurasthenia. Such a child often has violent headaches, usually due to over-pressure. Many such children become insane in later life. Such cases of dullness in general may recover their normal powers under proper care, otherwise the dullness may increase until the child loses its mentality. In older children this condition may be due to masturbation.

Tredgold points out that while a mentally defective child may have fits, epilepsy may be the cause of temporary mental dullness. "In most of these cases there will be a history of fits, but they may be nocturnal only, and unknown to the parents." Such cases are characterized by loss of memory and alternating states of brightness and dullness which are not common in cases of real mental defect. Such cases may, however, develop into amentia, and later dementia may develop.

The tendency now is to place epileptic children in schools by themselves. England has done most in this direction.

The Moral Defective

The moral defective may be defined as a person who displays "from an early age, and in spite of careful upbringing, strong vicious or criminal propensities on which punishment has little or no deterrent effect." Tredgold says that the mind of the average normal man is characterized by "four chief 'senses' or sentiments,—the moral or social, the logical or intellectual, the religious, and the æsthetic."

The moral sense is that complex of experiences which causes the possessor to appreciate the obligations which he owes to his fellows. It has its basis in human sympathy which has held society together from the beginning.

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The logical or intellectual sense enables us to see the connection between different mental concepts and to refer each new percept or idea to the proper related group of ideas, or mental concept.

The religious sense inspires us with a feeling of a relationship to a power superior to man.

The æsthetic sense enables us to see the harmonies of form, color, and sound, which we call beauty.

As is well known a person may be deficient in one or more of these senses. If such a person is deficient in the intellectual sense he belongs to one of the three grades of amentia which we have just been discussing.

This may take the form characterized by Storring[3] as intelligent feeble-mindedness (*intelligente Schwachsinnige*). Such a feeble-minded person, according to Meumann, may succeed tolerably well in passing through school and even the university but in practical life discovers his inability to judge among the conditions which surround him and to govern himself according to these conditions. Such a person may give the impression of being a highly gifted man, and often nothing of his weakness is noticed until, all of a sudden, his inability to pass judgment on some point shows itself. This most often reveals itself in a total indecision in the face of the enticing stimulus of a fleeting desire. This indecision is due to weakness of judgment. Reasons opposed to the case in hand are not drawn from the person's previous experiences. The physical basis for this weakness of judgment is not known. It is not necessary to characterize persons who lack the religious sense nor those who fail to appreciate the beauties of form, color, and sound.

Those persons who have no moral sense, no conception of the obligations which are due their fellows

[3] Meumann's Vorlesungen—Experimentelle Pädagogik Vol. I, pp. 412-3.

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are called moral defectives. Tredgold[4] divides them into two classes:

(1) The Latent Moral defective and (2) the True Moral defective.

1. Latent moral defectives are those persons who although "they have no feelings of repugnance or shame at the thought of a criminal or immoral act, and although they cannot appreciate the ethics of the Decalogue," yet have intelligence enough to fear the consequences of breaking the civil or moral law, that will come in the way of civil punishment or social ostracism. They have intelligence enough to hold the moral defect in check. Such persons may be called potential criminals.

Such persons are not mental defectives for their intellectual powers are intact. If they commit crime, it is with a full sense of its consequences. It is because persons of this class lack the moral sense that they often exhibit so little feeling after they have been caught in some criminal or immoral act.

2. True moral defectives are those persons who have no moral sense and in addition are probably lacking in the intellectual sense so that the fear of punishment or social censure seems to exercise no restraining influence upon them. They commit, repeatedly, immoral and criminal acts, and punishment seems to have no effect. From these persons the habitual and instinctive criminal class is largely recruited. The well-known Jesse Pomeroy is a moral defective. He had, as Dr. Fernald tells us, at the time of the commission of his notorious crimes, been accepted for admission to the Massachusetts School for the Feeble-Minded. He has a keen intellect in many respects. This manifestation of intellectual power has led many to affirm that there

[4] Mental Deficiency, p. 294.

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was no mental defect in such persons. The lack of control of such persons over their evil propensities even when they know that severe punishment has followed and is sure to follow, would indicate what Meumann[5] has characterized as a partial arrest of development of the judgment centers of the cerebrum.

Moral defectives should ordinarily not be assigned to special classes for the mentally deficient. The special disciplinary class is the place for them so long as they remain in the public schools; they should, however, be assigned as soon as possible to a custodial institution.

Miss Margaret Bancroft is of the opinion that special education of the moral defective from the earliest age up to the age of twenty-four, always having in view the elimination of the particular defect, would finally result in the elimination of moral deficiency. She would have, for example, a boy or girl who is untruthful and unwilling to do assigned work, set to work performing exact measurements: measure just three inches; make a three-inch square; fit the ends correctly. Persist in having everything done exactly as it should be done even if the child has to be shown how "a thousand times." Perseverance in all this work will in the end be the "open sesame" to the abolishment of moral deficiency.

After control had been gained over the child's habits through years of endeavor, Miss Bancroft[6] would complete the training by a course in the sciences, "especially in zoölogy and botany, and those branches which require microscopic investigations."

Most educators who are experienced in the training of the mentally defective do not take such an optimistic view of the education of the moral defective.

[5] Vorlesungen Vol. I, p. 413.

[6] Light Through Broken Windows, p. 3, reprint from Journal of Psycho-Asthenics, December, 1904.

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Dr. Fernald[7] says that while the acts of childhood due to this "slight degree of imbecility," (moral defect) may, under the guidance and protection of a good home, be of a harmless nature yet acts due to the "temptations of adolescent and adult life are quite another matter." He finds that moral defectives who have been put early in childhood or youth under permanent training and protection are far different in their conduct from those who have lived in towns and cities with only the restraints of home. The former cases "trained from childhood and youth may be taught habits of industry and comparatively good behavior, and after twenty-five years of age a large proportion of them settle down to a condition of ostentatious pride in the virtues which they unwillingly practice."

Undoubtedly the custodial home or farm colony is the only safe place for the moral defective.

Epileptic Children

Only a little has been done in this country to establish schools or classes for epileptic children. There were two classes established in Baltimore some years ago but the attendance was so small that the School Board was led to doubt the expediency of maintaining them; it was finally decided not to limit their membership to epileptic children only, but to admit other mentally defective children, it being the opinion of some medical experts that the spasms of the epileptic children had no injurious effect on the non-epileptic children. In general, however, it would seem best to exclude from the regular and also the special classes children who are subject to frequent epileptic spasms. Such children should be taught in classes organized especially for them or sent to epileptic colonies.

[7] The Imbecile with Criminal Instincts, Reprint from American Journal of Insanity, April 1909, p. 747.

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We have tried to characterize in the foregoing pages the children who will be likely to appear as candidates for admission to the auxiliary or special school or class.

Where these schools or classes have reached their best development they are exclusively for those pupils suffering from mental defect but of such a degree that there is hope that by proper instruction and training they may become capable of supporting or partially supporting themselves. These schools are for children suffering from the lightest degree of feeble-mindedness or amentia. They are for "morons," not for either imbeciles or idiots, nor are they for normal pupils except in those cases where the degree of retarded development is for a time closely allied to mental defect. In such cases the special class with its individual teaching is probably next to an individual teacher at home, or a very good private institution, the best place for such retarded children.

Children who are stutterers or stammerers but who are mentally normal should not be placed in the special class for defectives, They should be sent to a special school where they may receive instruction for a few hours a week in methods of correcting the defect.

It may be pointed out, however, that in many small cities and towns it will be difficult, at first, to form classes composed only of mentally defective pupils. In such cases, the endeavor should be to form special classes to which may be assigned both the mentally defective and the backward pupils. In this way the worth of such organization can be demonstrated and a stricter classification can follow later.

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Chapter Six

THE AUXILIARY SCHOOL BUILDING AND ITS EQUIPMENT

As auxiliary schools and classes become better organized the tendency is, in general, to place them in buildings especially adapted to their needs. By vote of the London County Council, buildings and rooms designed for such schools and classes must be constructed and arranged to meet certain requirements in order to obtain the special money grant. The site must be approved by the department of education. Schoolrooms must have twenty square feet of floor space for each pupil. There must be adequate play-grounds, drill rooms, and lavatories. All rooms must be on the ground floor and must be equipped with individual desks.

Fernald[1] states that the cost for construction of these buildings has averaged about one hundred dollars per pupil. The enrollment at these schools is from 60 to 80 pupils. Several sketches of the floor plans of these buildings are given in the appendix.

Schulze[2] maintains that since the school is for many of the unfortunate children who attend it, the only place of love, joy, friendliness and sunshine that they know, it should be a model in its material equipment, being an example of good light, good air, cleanli-

[1] See pamphlet, Mentally Defective Children in the Public Schools, p. 3.

[2] See article, Ausstattung des Schulhauses und des Schulzimmers. Handbuch der Heilpädagogik, p. 242.

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ness, and order, things that are wanting in most of the homes from which the children come.

In addition to the regular schoolrooms the building should have an assembly-room large enough to seat all pupils and a goodly number of friends and parents. In this room should be held the general exercises, devotional exercises in the morning and the exercises on special days. It should have a projecting lantern and a piano, or better a player-piano, thus enabling the children to see good pictures and hear good music. The walls should be adorned with a few good pictures that appeal especially to children and from time to time the meaning of the pictures should be explained to the children.

There should be a clinical room in which the school physician may keep his testing and measuring apparatus and make his examinations. This room should have a small dark-room for making examinations with the mirror, of the eyes and the throat; it should have a microscope for making bacteriological examinations, and instruments such as the spirometer, stethometer, cephalometer, and dynamometer, different types of which are described by R. Schulze in his Aus der Werkstatt der experimentellen Psychologie und Pädagogik and in Whipple's Manual of Mental and Physical Tests.

There should also be a sterilizing apparatus for disinfecting the instruments, and an emergency case containing the necessary materials for extending "first aid" in case of accidents among the pupils, and a disinfection apparatus for disinfecting the schoolrooms in case of an outbreak of contagious disease. The lavatory of the room should be equipped with both hot and cold water; a photographic apparatus is essential for taking a photograph of the pupils at their entrance to the school and at different times during the course of their membership in the school.

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There should be a rest room equipped with a couch or cot for the use of children who are taken sick suddenly, or in case of accidents, or spasms.

Manual training rooms, equipped for work in wood and iron, should be given ample space.

The girls should have rooms assigned for their work in sewing, cooking, and laundering. The writer has seen a very good equipment for this work in some of the special schools of Washington, D. C. It has been suggested that a suite of rooms, consisting of kitchen, dining-room, bed-room, and sitting-room be connected with each center in order that the children, especially the girls, may be given correct ideas of a simple, well-arranged, house equipment and learn how to care for it. The bed-room could serve for the rest room described above and the sitting-room for a reception room for the school.

There should, of course, in every building, be separate rooms for the director of the school and the assistant teachers.

Schulze suggests that the school building be provided with an observation tower from which the children may be taught the topography of the surrounding country. He also thinks a gymnasium fitted out with the necessary apparatus for correcting physical defects is essential.

Hygienic considerations demand that there should be baths supplied with both hot and cold water. The simple shower-bath is not thought sufficient by some writers, although its greater cleanliness would strongly recommend it. A covered walk or portico should be provided where these children, who need pure air so much, can take their recreation in unpleasant weather. It is also probable that in the near future the outer walls of all schoolrooms will be so arranged that they can be opened and the schools made practically open-air schools.

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The school grounds should be large enough to furnish space for a school garden in connection with which there should be a place for the keeping of animal pets.

The school grounds should have shade trees under which are sand piles, swings and teeters, and other simple playground apparatus of such a nature that the likelihood of accident is reduced to a minimum.

The schoolrooms should be equipped with modern adjustable desks and seats. There should be closets and cabinets sufficient for the storage of books and apparatus. The rooms should be light and airy, supplied, of course, with properly warmed air from a modern system of heating and ventilation. Sand tables, aquaria, and telluria form important parts of the equipment of such a room, as do wall charts and maps and other illustrative apparatus.

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Chapter Seven

SCHOOL SESSIONS AND THE DAILY PROGRAM

If the children attending the auxiliary school or class have to come considerable distances to attend the school, and especially if a meal at noon cannot be served them, one session each school day is probably better than two sessions. The auxiliary schools in many of the American cities have the one session day.

Frenzel states that on hygienic grounds one session is better than two because it saves the time and energy of the pupils, since they must go to and come from school only once a day. Thus, in summer, with the one session plan the long walk home and back in the heat of the day is avoided, and also in winter the walk home after dark. Of course, these objections would not be so pertinent in case the children were transported by teams or street cars as is often the practice. It is also urged that the intermission at noon is not long enough to enable the pupils to recover from the fatigue of the morning and they are thus unfit to take up the work of the afternoon.

"By the abolition of the afternoon session," writes Frenzel,[1] "the children will have more time for the preparation of school work, for recreation, and for occasional help from parents." "In certain cases," he continues, "it would seem best to recommend, on moral grounds, that the children be kept busy at the auxiliary school in the afternoon rather than left to

[1] See article, Studenplan. Handbuch der Heilpädagogik, p. 1672.

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themselves to spend the time in vice and idleness or be employed for profit by unscrupulous persons." Afternoon sessions for this purpose have been successfully conducted at Breslau and Leipsic. Such a care-school is also carried on in connection with the state auxiliary school at Budapest.

Place and Length of Instruction Periods

The harder subjects should come early in the day, but difficult studies should not immediately follow each other. An easier study should intervene.

It would seem that American schools are inclined to give more varied programs than are the German schools. They also have shorter lesson periods, averaging from fifteen to thirty minutes for the regular studies, such as reading and arithmetic, while the German school still clings to the idea that there must be longer periods in order to make the instruction efficient. There is, however, a tendency among German educators to shorten these periods.

Offner, in his "Mental Fatigue,[2]" cites Heller as authority for the statement that a half-hour ought to be regarded as long enough for a school exercise with feeble-minded children, and that the rest periods for non-compulsory activity (especially in the open air) or for taking a moderate amount of nourishment should be longer for feeble-minded children than for those who are normal.

DAILY PROGRAM, AUXILIARY CLASS
Boston, Massachusetts.

Time.
9.00 Psalm and Lord's Prayer
9.05 Morning Song
9.10 Weather Observations
9.15 Oral Spelling and Written Sentences
9.30 Primer Class in Reading
9.45 Second Class in Reading, First Readers

[2] English Translation by Whipple, pp. 81 and 86.

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DAILY PROGRAM, AUXILIARY CLASS—(*Continued*)

Time.

10.00 Third Class in Reading, Second Readers

10.15 Fourth Class in Reading, Third Readers

10.25 Light Calisthenics
- Swedish
- Wand Exercises
- Horizontal Bar
- Striking Bag

10.35 Number Classes

11.00 Luncheon

11.15 Recess

11.30 Miscellaneous Work varied from day to day
- Nature Work
- Drawing
- Writing
- Music
- Cutting
- Paper Weaving
- Paper Folding
- Word Matching
- Blackboard Drawing
- Dominoes
- Telling Time
- Measuring
- Compass Work
- Thursdays: Kindness to Animals; Band of Mercy Work

12.00 Gymnastics, Hopping, Skipping, Trotting, Deep Breathing, Wands, Dumb-bells

12.10 Mondays, Tuesdays, Wednesdays, Thursdays
- Basketry
- Weaving
- Sewing
- Crocheting
- Outlining
- Cane-seating
- Knitting
- Bench Work in Wood for older pupils
- Thursdays, Clay Modeling

1.00 Dismissal

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Daily Program of Studies of a Three Grade German Auxiliary School, with Preparatory Class

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8 to 9	I, II, III, P: Religion	I, II, III, P: Religion	I, II, III, P: German	I, II, III, P: German	I, II, III, P: Religion	I, II, III, P: Religion
9 to 10	I, II, III, P: Arithmetic	I, II, III, P: Arithmetic	I, II, III, P: Arithmetic	I, II, III, P: Arithmetic	I, II, III, P: Arithmetic	I, II, III, P: German
10 to 11	I, II, III, P: German	I, II, III, P: German	I: Drawing; II, III: Object; P: Study	I: Drawing; II, III: Object; P: Study	I, II, III, P: German	I, II, III, P: Singing
11 to 12	I, II, III: Handwork; P: Free	I, II, III: Gymnastics & Play; P: Free	I, II: History; III: Writing; P: Free	I, II, III: Geography; P: Free	I, II: Handwork; III: Gymnastics & Play; P: Free	I, II, III: Writing; P: Free
12 to 1	I: Geography; II, III, P: Free	I: Writing; II, III, P: Free		I, II: Gymnastics & Play; III, P: Free	I, II, III: Natural Science; P: Free	

I —Higher Grade, 28 hours of instruction required weekly.
II —Middle Grade, 26 " " " " "
III—Lower Grade, 22 " " " " "
P—Preliminary Class, 20 hours of instruction required weekly.

From Handbuch der Heilpädagogik, p. 1674.

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Chapter Eight

DISCIPLINE IN THE AUXILIARY SCHOOL

The discipline in the auxiliary school should be kind but firm. Fodéré, Iphofen Itard, Guggenmoos, Guggenbühl, Kern and Saegert, would appear, since they do not mention corporal punishment in their writings, not to countenance it as a means of discipline in the training of mentally deficient children. They regard such children as weak of will and not responsible for their misdeeds. Well-known German educators, as Stötzner and Gläsche, wholly disapprove of the use of the rod. Kirmsse quotes the latter in his article on "Corporal Punishment among the Mentally Defective" in the *Handbuch der Heilpädagogik* to this effect.

"If corporal punishment should be used with greatest caution in dealing with normal children, then it should be used with far greater care in dealing with weak and defective natures. Have these poor souls, who are in no way to blame for their afflictions, no claim on our forbearance and patience? It frequently happens that a child appears more depressed and dreamy than usual. Since the teacher must not allow himself to be overcome by ill humor or be led into severity, he must seek to awaken the child's dormant attention either by a proper change of work or a short exercise in gymnastics, or by other agreeable stimuli.

"With passionate and defiant children, a good strong shaking by taking hold of the shoulder may not be out of place for it brings such children, more than would

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corporal punishment, to a realizing sense of their weakness."

Probst, founder of the asylum for cretins at Ecksberg, would allow corporal punishment. He recommends as punishments for the wilfulness and wrong-doing of the mentally defective:

1. An unfriendly look by the teacher;
2. A slight;
3. Deprivation of food;
4. The rod.

He would not inflict corporal punishment in the presence of the other children. They learn of it and fancy it more severe than it really was, and this thought keeps them from similar mistakes. Several directors of German institutions justify the use of corporal punishment with healthy feeble-minded children. But Kirmsse[1] points out that the best authorities at the present time take the same stand in regard to the infliction of corporal punishment on the feeble-minded as they do in regard to its use on the insane; it is not justifiable in either case.

In the auxiliary schools of Brussels, Belgium, corporal punishment is not used, the teachers excusing the transgressions of the children on the ground that the latter cannot be held responsible. The best American institutions for the feeble-minded do not use corporal punishment; the system of incentives in use at the Training School,[2] Vineland, New Jersey, is worthy of imitation in all schools.

Abnormal children are very sensitive to the affection of the teacher; a calm, patient, gentle, affectionate teacher will have little trouble in disciplining her school.

[1] See article, Züchtigung, körperliche bei Schwachsinnigen, Handbuch der Heilpädagogik, p. 1951.

[2] See article, An Experiment Station in Race Improvement. Frances Maule Bjorkman. The American Review of Reviews, Sept., 1911, p. 328.

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The children soon come to love such a teacher and do right because they love and wish to please her, and such right doing tends to crystalize into habit. Rewards may be used with success in dealing with the mentally defective.

In the auxiliary schools at Bordeaux, France, the children are rewarded for good behavior and work with a walk or with the privilege of being shown the pictures by the stereopticon which belongs to the school.

The teacher should seek by every means to develop the affective natures of the children. They should not only be given clear ideas concerning different things, but should have the finer feelings aroused, that cluster around so many of these ideas. This is difficult work, but upon its accomplishment depends a greater part of the success of moral training in dealing with the mentally defective.

In the French auxiliary schools, disciplinary cases are accepted as well as mentally retarded cases.

Philippe and Boncour insist in their book, "*L' Education des Anormaux*"[3] that children who are unstable and intractable in their character, and not amenable to discipline, either in their conduct or their work, and who are generally characterized as lazy, are really suffering from some malady and need the care of a physician.

They assert that in dealing with vicious children, every effort should be made to discover, if possible, among the bad tendencies, some good trait by cultivating which the child may be led to gain control over his evil tendencies.

[3] Paris, Alcan, 1910.

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Chapter Nine

PROGRAM OF WORK

Seguin, the Pestalozzi of education for the mentally defective, laid the foundation of all future methods for educating the feeble-minded in his book entitled: *Treatment moral, Hygiene, et Éducation des Idiots et des autres Enfants arriérés.*

He called his treatment "physiological education," an adaptation of the principles of physiology, through physiological means and instruments to the development of the dynamic, perceptive, reflective and spontaneous functions of youth," since "the physiological education of the senses must precede the psychical education of the mind."

Seguin shows that the order of development is as follows:[1]

1. The development of functions of the imperfect organs, through exercise.
2. The training of functions so as to develop the imperfect organs.

The work of educators since Seguin's time has been to elaborate methods for which he laid the foundation. The work in sense and muscle training begun by him now forms a part of all successful methods of educating the mentally defective.

Sense Training

Mentally deficient children react weakly, in general, to sense stimuli. The sensory centers are often defec-

[1] Seguin, New Facts, p. 41, New York, 1870.

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tive in their development. These centers must be brought into activity through suitable training. Dr. C. W. Eliot[2] points out in his essay, *Education for Efficiency*, that the "training of sight, hearing, smell, taste and touch has been neglected in education to a most extraordinary degree." He then goes on to point out the great practical value of a special training of these senses. The normal child, however, develops all these senses to a greater or less degree without special training. This is not true of the subnormal child. He has to be taught what other children pick up of themselves. The ideas of the subnormal child are not like those of normal children, because he often fails to see, hear, feel, taste and smell as they do. Much can be accomplished in the way of improving these sense defects by the proper training exercises. Some of the best, suggested by American and European authorities, are given in the following pages.

Visual Sense

Cut up pictures or use "sliced animals." Have children put these together from models and from memory.

Place on a table before the children, pieces of cloths, papers, carpeting or other material, each piece in duplicate. Mix together the pieces. Have children find the pieces that match. Have them group the pieces according to material.

Arrange splints, squares, rectangles, cubes and prisms in order of lengths, according to similarity in surface forms, and in volume; if these forms are painted (as they are at Waverley) they may be arranged according to color.

[2] See Education for Efficiency, p. 6.

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Have the pupils fit the outlines of different shapes cut from pasteboard or wood, with the cut out pieces. Such forms can be easily cut from thin pieces of wood with a scroll saw. The form-board can be used for this work. It is well to have the pieces rather large, especially for children just beginning school. Have pupils estimate and visualize lengths. The boxes of number sticks containing measures from one inch to 12 inches in length are good for this purpose. These boxes have 12 one-inch measures, 6 two-inch, 4 three-inch, 3 four-inch 2 five-inch, 2 six-inch and one of each of the other measures up to and including the 12-inch.

Arrange a group of objects in a certain way. Have pupils observe the arrangement. Then have pupils close their eyes or face the other way while the teacher changes the position of one or more objects in the group. Then ask some child to place object or objects in the former position. Make a sketch of some object on the blackboard. While the children close their eyes make some change in the sketch and then ask children to open their eyes and see if they can tell what the change was.

The color sense may be developed by classifying colored splints, squares and other forms; by stringing colored beads; by arranging bottles of water colored differently with vegetable dyes. Indoor and outdoor croquet are good for a beginning in color work as well as for developing attention and muscular co-ordination.

Rouma says that reading and spelling are based on the differentiation and fixation of visual impressions. It is essential that children, both normal and subnormal, have their powers of attention trained by exercises similar to those just given before they begin the real work of learning to read.

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Hearing

The child, blindfolded, goes in the direction from which someone calls; recognizes his companions by the sounds of the voices or by the sound of the footsteps; tells whether the speaker is far or near; tells by the sound, kind of material that is struck or that falls on the table or floor; such as, wood, glass, pasteboard, paper, iron, tin or lead; tells pieces of money from the sound when dropped; reproduces a rhythm of sounds tapped by the teacher on the table or elsewhere; recognizes familiar tunes by the rhythm; recognizes sounds of different instruments, also recognizes the sounds characteristic of different familiar animals.

Touch

The sense known as touch, is really a complex of senses; pressure sense, muscle-sense, stereognostic sense, pain-sense and temperature-sense are all more or less closely associated under what is generally known as touch. Through the pressure sense the child gets information concerning the surface of objects, whether they are rough or smooth. Through the muscle-sense aided by the pressure sense the child gets his ideas of weight by lifting different objects.

Ideas of form are gained through the stereognostic sense, by having objects come in contact with the body, the hands and the tongue being most concerned in this sense. Sensations of heat and of cold are conveyed through the hot spots and cold spots of the temperature sense. The pain-sense gives information concerning stimuli that are so strong "that injury to the tissues may result."

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Pressure-Sense

Develop ideas of rough and smooth by presenting to blindfolded child, a rough and a polished surface; of hard and soft by presenting a smooth, not polished, surface and a small pad or cushion stuffed with cotton or down; of wet and dry by giving the child two pieces of cloth, one of which has been wet; ideas of (1) elastic, (2) sticky and (3) oily: (1) by pressing with fingers a piece of kneaded rubber, (2) by placing a drop of glue on the top of the fore-finger, then touching the thumb or any surface with the finger and (3) by touching cardboard, the surface of which has been coated with olive oil; of different materials such as glass, wood, cloth, iron, marble and other materials by touching them. The child will in the end be able to recognize by the pressure sense, cotton, woolen, and silk cloth, hair cloth, velvet, satin, burlap, different kinds of paper, sheet-rubber and other materials.

Dr. Farrington recommends that these materials should be in pieces of uniform size, about 4″ x 4″. They should be placed in a cloth bag, the open end of which can be drawn together by a string or tape. The child inserts his hand and names each material as he touches it, withdrawing the piece of material as he names it.

Stereognosis

By the stereognostic sense, the child is taught to recognize and name familiar objects by "feeling their shape." At Haddonfield five objects, small enough to be easily grasped by one hand, such as, a cube, cone, cylinder, pyramid, and sphere are placed in the recognition bag. The child inserts his hand and and names the object without withdrawing it. The objects must not be felt through the bag. Three

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different objects are placed in the bag and the child is requested to find, by feeling, the one that the teacher designates. A variety of common objects may be placed in the bag, the children vying with one another to see who can name the most by the stereognostic sense.

More difficult than to merely name objects by this sense, is the recognizing and the description of the shape of objects, stating whether they are spherical, cubical, conical, pryamidal or cylindrical, the ideas designated by the words having been previously taught the children. *Flat*, *irregular*, *thick*, and *thin* may be taught by using pieces of wood of appropriate shapes. Differences in size are taught by the use of two similar forms; such as a large and a small cube, or a large and a small pyramid. The child finds the large or the small form at the teacher's command. Then several objects differing in both size and shape are placed in the bag, and the child finds the one designated by the teacher. The children may then be blindfolded and asked to recognize and name different objects in the room by feeling their outlines.

Finally, the children may be taught to recognize the letters of the alphabet which have been cut in triangular grooves on blocks of wood 1″ x 3″ x 3″. After the pupils have become skilled in recognizing the letters singly, they may be asked to spell familiar words by withdrawing the letters from the bag in proper order. The sandpaper letters of the Montessori system may be used to develop this sense. The child, blindfolded, may also fill in the spaces of the formboard.

The Muscle-Sense

This sense is developed by leading the child to recognize equalities and differences in the weight of

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objects. At the Bancroft School, three cubes, four inches square, and three pyramids with bases 4 inches square and a height of 6 inches, are used for this purpose. These are painted white and two of the cubes and two of the pyramids are weighted so that one cube and one pyramid will be of equal weight and heavy, and one cube and one pyramid will be of equal and medium weight. The third cube is drilled and weighted so as to be of equal weight with the third pyramid. There are thus three pairs of weighted objects, each pair differing in weight from the other two pairs.

At first, the light and the heavy pair are used. The four forms are placed before the child and he lifts them one after the other. After he has had an opportunity to note the difference in weight, he should be taught to designate the forms as the heavy cube and the light cube, the heavy pyramid and the light pyramid. He should learn to place the heavy pair and the light pair together. The exercise may be varied by having the child place the heavy pyramid on the light cube and so on. The child should learn to do this quickly and with both right and left hand. These forms may be weighted by drilling the ends and filling the holes with shot set in paraffine.

Four small pails or four grape baskets alike in size and appearance may be weighted with stones or sand, so that one pair is heavy and of equal weight and the other light and of equal weight. The child brings the heavy or the light pail or basket or the heavy or the light pair in response to the teacher's directions. By varying the weights of the pails or baskets, the child gets clear ideas of the positive and comparative degrees and applies these ideas in estimating the weights of common objects in the schoolroom. The third degree of comparison is introduced by means of the three pairs of cubes and pyramids, and by vary-

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ing the weights of the pails and baskets; also by the use of stones and other material of three degrees of weight.

Temperature-Sense

The pupil is trained to discriminate differences in temperature by immersing his hands in water of different degrees of temperature from cold to hot.

Taste and Smell

All gustatory sensations, with the exception of bitter, sweet, sour, and salt, are the result of a combination of the sensations of taste and smell. The child may be taught bitter, sweet, sour, and salt, using dilute tincture of nux vomica, rock candy syrup, vinegar, and a strong solution of salt, respectively, for the four sensations. A drop of each liquid should be placed on the tongue of the child who is blindfolded. It is suggested that the child be blindfolded by means of automobile goggles in which the glasses have been painted. The child should rinse his mouth with water after each test, in order that each sensation may be clear and unconfused.

The child is further taught to recognize by taste, coffee, tea, pepper, mint, chocolate, grape juice, vinegar, rhubarb, cranberry, almond, vanilla, sassafras, citron, apple, banana, fig, olive, sweet pickle and sour pickle, different vegetables, syrups, and other materials.

Smell

In order to call the olfactory sense into activity, dilute ammonia, camphor, oil of peppermint, and oil of cloves are recommended by Dr. Farrington. These may be followed by oil of wintergreen, oil of cinnamon, oil of bergamot, oil of lemon, oil of orange, kerosene,

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wood alcohol, licorice, celery seed, caraway seed, gasoline, pine needles, sage, orris, bay leaves, camomile, and other odoriferous materials.

All who have visited the Massachusetts School for the Feeble-Minded at Waverley, will agree with Miss Denby[3] that what she has called the sense-room is an especially valuable aid in teaching mentally deficient children. This room is furnished with large tables which are arranged along the sides of the room. There is a special table for each of the five senses; on the walls are cabinets in which are kept the necessary materials used for developing the several senses.

Vaney in his *Les Classes pour Enfants arriérés* has given under the head of "mental orthopedy" three graded series of exercises for gaining mental and muscular control, which is only another name for gaining the power of attention.

There are exercises in immobility by which the pupils are taught to stand in fixed positions as motionless as statues. At first they are able to maintain these positions for only a few seconds, but after sufficient practice many children hold themselves motionless for a full minute at a time.

Binet[4] writes that he has seen undisciplined, noisy children, who were the despair of their teachers, put forth in the "statue exercises" for the first time serious effort and put all their self-conceit into remaining motionless. "They were then capable of attention, of willing, and of controlling themselves." He also says that these exercises become so agreeable that the children ask to be allowed to practice them.

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[3] See her article on the Training and Management of Feeble-Minded Children, in Lapage's Feeble-Mindedness in Children of School Age, pages 271-274.

[4] See Les Idées Modernes sur les Enfants, p. 151.

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Binet describes other exercises for developing motor ability: e. g., the carrying of plates full of water from one place to another without spilling any of the contents. He also tells of one class of mentally deficient children who, by practice, became able from memory, to write the names of nine different objects which were exposed before them for five seconds.

There are also exercises with the dynamometer in which children vie with one another to make the best record for a series of days, the result of each pupil's performance being announced by the teacher and written in the pupil's record book. These competitive exercises tend to wake up the passive natures. The idea is to get the pupils to put forth intense effort for a short period. Emulation helps to accomplish this. Binet points out the necessity in this work of warm words of encouragement from the teacher and of making known to the pupils all their results by means of individual and class marks, which are posted each day on the walls of the classroom.

Binet thought that in using these orthopedic exercises, he had found a new and better method of education for normal as well as abnormal children. He anticipated Dr. Montessori.

Muscular Control

Early exercises in muscular control may take the form of placing one block of wood on another, taking care to have the blocks large, brick size and half brick size are good; also blocks cut two by two by about eight or ten inches. The blocks may be painted the different primary colors.

At first the placing may be done in imitation of the teacher, then at a word of command, finally after the pupils have learned the colors, the blocks may be designated by their colors; as, "Place the yellow

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block beside the green; balance the red block on the end of the white; place the blue block above or below the orange one."

Then come walking between the rungs of a ladder laid flat on the floor, thus teaching the children to lift their feet in walking; balancing first by walking a broad beam, later the narrower plank; throwing and catching the ball (an excellent exercise in training the attention), throwing the large ball into the air and clapping the hands once before catching it as it descends. The writer has in mind one feeble-minded boy who, for a long time, was unable to accomplish this apparently easy task. He would clap his hands twice instead of once. He finally gained the power to clap them only once much to his delight.

Jumping, using the standards, furnishes another valuable means of training the attention. The jumper has to estimate the height of the cord and then make the jump accordingly. This sort of work tends to develop the larger muscles and is a necessary preparation for the later training of the finer muscles.

The writer is acquainted with a feeble-minded boy of sixteen or seventeen who, because of lack of such training, cannot throw a ball more than a few feet, and cannot jump. The muscles of his body are flabby and undeveloped. He reached the fourth grade in the regular public schools, and was then sent away to a private school where he was preparing to take Latin. His greatest need was good, sensible instruction about common things that would cause him to exercise his common sense; training in manual work and, most of all, systematic physical training.

Physical Training

Physical education should have first place in the auxiliary school. Mentally defective children are, as

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a rule, weak physically; they are below normal children of their age in both height and weight. The teacher should, if possible, visit the homes of the children and try to persuade the parents to keep the children clean, to give them plenty of fresh air in their sleeping rooms, (oftentimes several children occupy one small bed at night), and to furnish them with plain, wholesome food. Miss Mary Denby[5] recommends the following as a good and sufficient dietary for feeble-minded children:

Breakfast; bread and milk one day, porridge and milk the next, with bread and butter added if the child is still hungry.

Dinner; potatoes over which a stew or broth has been poured; two other vegetables; plenty of bread; milk pudding; jam or suet roll or stewed fruit; soup; fish, and baked beans, instead of meat, may each be served once a week to secure change of diet.

Tea: bread and butter, jam or syrup; lettuce in season; milk. Miss Denby states that if "children have a pint and a half of new milk a day in addition to solid food" they are sure not to be underfed. In winter she suggests the use, at times, of cocoa instead of milk.

In the special schools of Birmingham, England, a wholesome and appetizing dinner is provided each day for both the mentally defective and the crippled children. The price charged each child is 2 d. (4 cents) a day. In the great majority of cases this money is collected without difficulty, the children either paying each day or at the end of the week, little slips on which a record of the payments is made being sent home to the parents. Where the parents are too poor to pay the whole charge, then a half penny (1 cent), or 1 d. (2 cents), or 1-½ d. (3 cents) is taken, the plan

[5] See Appendix I Lapage's Feeble-Mindedness in Children of School Age, p. 248.

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being to pay as much as they can afford up to 2 d. (4 cents). Only in a very few cases does the dinner have to be furnished free for any length of time, and only a few parents fail to pay regularly the required charge. "It is interesting to note that a small surplus remains at the end of each school term which is used judiciously for the benefit of the children in the school."

The expense for the salary of the cook, for utensils and for fuel is borne by the city. The main object in requiring the parents to pay for the meals served at the school is not to save the city the money that would have to be expended if the principle of paying for them was not in force, but to "impress the children and their parents with the importance of paying as they go and of thus preventing any tendency towards pauperizing those whose hard position in life would naturally make them more susceptible to such influences."

In many German auxiliary schools a substantial lunch is furnished the children. Light lunches are served the children in some of the American auxiliary schools. If much is to be done in the way of the proper training of these children, it is essential that they be properly nourished. Much good has resulted from sending such children of the cities into the country for a few weeks vacation. In Germany the boys of some of the auxiliary schools take long tramps of several days under the leadership of their teachers. Rational gymnastics, free play, and swimming are excellent for developing the muscles of the body. Gymnastic dancing to music will some day occupy a large place in the physical work of these schools, as well as in that of all public schools. The rhythm of the music obliges the children to give attention and their movements to music are freer and fuller, than without music. Breathing exercises and exercises in articu-

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lation have been mentioned in another place in this study. As has been often pointed out by many writers, body-building must precede mind-building. The right kind of muscular development means mental devlopment. The muscles are the organs of the will and it is will-power that the mentally deficient child needs most of all to acquire.

Manual Work

"The manual work in the auxiliary school," says Vaney, "should serve the two-fold object of promoting the general education of the child and of preparing him for an apprenticeship in some trade." Some of the manual work in the lower grades may be given to the younger boys and girls in common; such as weaving, folding, cutting and bookbinding. For the older girls there may be mending, patching, hand and machine sewing. In one of the special schools that the writer knows very well, some Italian girls made during one winter some flannel petticoats. The morning after they were finished, the girls came to school wearing the petticoats as dress-skirts and they were, indeed, prettier than the old dresses the girls had been wearing.

The boys may work at whittling, modelling, and bench work in wood and iron. In one of the special schools of Boston, the older girls work at the sloyd benches. In some of the London special schools each of the pupils is supplied with a back saw, hammer, nails, and a bench hook, in the upper cleat of which a groove is sawed. Thin pieces of wood in three widths are supplied to the pupils who work at their regular desks, the grooved bench hook fastened to the desk enables them to saw the wood in the desired lengths to make many different things. They are in this way

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able to make small boxes, doll's furniture and a variety of other things.

It can be readily seen from what has already been said, that the children of the auxiliary school must be trained to habits of attention before they can take up with much success the more formal school work, such as reading, arithmetic and language.

Failure to recognize the fact that "attention is a faculty of inhibition and that its mechanism is essentially motor and thus always acts through the muscles, has led many teachers to proceed too soon to the formal work of the regular school, neglecting the work in muscle training, forgetting, as Maudsley points out, "that he who is not capable of controlling his muscles is not capable of attention," thus demanding of the defective child the use of a power he has not yet developed.

As introductory to a few suggestions on the work in certain of the formal studies, it cannot be too strongly emphasized that it is the height of folly to try to teach these studies to mentally defective children before they have had the preliminary work in sense training, muscular control, and manual work.

Reading

Almost any of the newer "combination" methods of teaching reading can be used in the auxiliary schools with success. It would seem to the writer that the phonic work could be more interestingly taught, if the teacher would use the plan as suggested in the Pollard Reading Method of having the pupils learn the sounds corresponding to those heard in nature, e. g., the sound of v corresponds to the sound made by the fly. De Croly of Brussels uses the sentence method for the pupils of the auxiliary schools; the pupils

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learn first to recognize one hundred short sentences written on cards. This, of course, is not so very different from the rhyme method. In many ways the rhyme or jingle method of acquiring the initial stock of words would seem superior.

There are many delightful readers of a simple nature which the children of the auxiliary schools will enjoy reading. It hardly need be said that the reading material should appeal to the active side of the children's natures. The selections in dramatic readers will aid in bringing the meaning of the printed page home to many children.

Arithmetic

The method in presenting arithmetic is to be essentially concrete. The large numeral frame, splints, blocks, squares and other teaching appliances are to be made use of, and their use continued as long as the child needs them. The Germans have devised many number machines for making concrete presentations of the number ideas more effective.

COURSE IN ARITHMETIC, LEIPSIC AUXILIARY SCHOOL

1st year:
Work in addition and subtraction. Numbers from 1 to 10.

2d year:
Addition and subtraction; numbers from 1 to 20.

3rd year:
Addition and subtraction; numbers from 1 to 50. Beginning of multiplication.

4th year:
Work in the four fundamental processes; numbers from 1 to 100.

5th year:
Work in the four fundamental processes, numbers from 1 to 1000; oral work with numbers from 1 to 100.

6th year:
Four fundamental processes, numbers from 1 to 1000 and above. Use of the simple fractions, common and decimal.

The Leipsic course may be taken as a type of many such courses in the auxiliary schools of Germany.

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In Meiningen, the sixth class is required to do a little simple work in reasoning and in the computing of interest.

Dr. Fernald has pointed out that most mentally defective children have difficulty with long division. Many, however, are able to learn the four mechanical rules, but when it comes to applying these rules to a real problem, they can do almost nothing.

Mr. George Benstead[6] writes; "Calculation often proves a stumbling block to feeble-minded children. This subject has to be presented in its most attractive form, but there are many ingenious contrivances now to be had, and the old "shop lesson," which is really a more glorified form of the old childish nursery game, is of great help, as the articles,—such as groceries, cardboard money, weights and scales, etc., are always in evidence, as a matter of some importance. Interest is sustained, the intellectual faculties are aroused, and the tension and strain of an ordinary dry-boned arithmetical lesson is not felt; whereas, further inducement to the child to do his best is the thought that at the conclusion of the business part there is the more pleasant function of participating in the eating of those portions of the products of the sale, such as sugar, etc., which, as a rule, is not a displeasing operation for a child."

Language

The aim in language should be to lead the child to express himself intelligently and as far as possible correctly, and to enable him to make simple written records, and to write a simple letter, both business and friendly. Correct language forms may be fixed through language games. Such language books as those of De Garmo furnish many valuable exercises for leading

[6] See Report of Special School for Boys, Otekaike Oamaru. Report of Committee of Education, New Zealand, 1909, p. 12.

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children to write correct sentences and simple paragraphs. These books do not demand too much of the children in the way of vocabulary.

Practical Life

The French auxiliary schools have in their program of studies a course called "Practical Life" which includes information about ordinary every day things that everyone needs to know in order to solve intelligently the problems one may meet in the world.

In this course the children are taught how to behave at table, to distinguish the different parts of the furniture, the cooking utensils, liquids and solids used as food; they learn to tie their shoes, to cover their books, to light the fire and sift the ashes, to write a letter and stamp and address it, to buy a railroad ticket and other things along similar lines.

Some Titles of the Lessons in the Course of Practical Life

THE DWELLING: The rent, the terms, the removal, the receipt for the rent, the apartments of the dwelling; cleanliness, washing, furniture polish, the door mat.

FURNISHINGS: The name and use of the furniture most generally used; how to arrange the dishes on the side-board, the linen in the closet; the window-curtains; the up-keep of the furniture; study of furniture catalogues.

HEATING: An order for coal; building a fire, study of the coal price-list.

LIGHTING: The different ways of lighting; gas, precautions; estimate of the expense.

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FOOD: The market wagon and the market; the small traders of the four seasons; the shop-keepers; price of current commodities.

PURCHASING: Price by the piece, by the pair, by the dozen, by the liter, by the kilogram, by the cask, by the bushel, and so on.

Making change.

Study of a grocery catalogue.

Vegetables; cleaning, washing, cooking.

BEVERAGES: Price, transportation, storing in cellar, placing in bottles.

FRUITS: Hygienic precautions.

KITCHEN UTENSILS.

CLOTHING: The care of the linen; washing, bleaching; care of the shoes; prices from catalogues.

EMPLOYMENT: Employment bureau; notices; work by the hour, day, week, month, by the piece.

MEANS OF TRAVEL: Different ways: omnibus, tramways, railways; tickets; different routes; time tables; circulars.

Object Lessons

Object lessons which may largely take the form of nature study, should constitute an important part of the work in the auxiliary school. It should constitute the foundation on which may be built the work in language, drawing and arithmetic. Where possible, and that means almost everywhere, the teacher should take walks with the pupils in the parks or into the woods and fields. These walks should have some definite end in view; the children should go to find or see some definite thing or things: birds, squirrels, flowers, trees, and so on. These things should form the basis for future language and drawing lessons. Such lessons are much better than those drawn from books. They lead up to books, for the children will, after such lessons, be

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glad to hear what the books say about the things they know about. If the teacher is a nature-lover, she can co-operate with the children in getting the material for an aquarium or a tellurium, and thus nature may be brought, in little, to the schoolroom.

There are, furthermore, many excellent collections of materials for object lessons in the form of nature cabinets, which may be used to give the children ideas about the different things they see about them every day. These cabinets contain many large cards, each one devoted to some topic; such as, the horse, cow, sheep, wheat, corn, silver, gold, iron. These cards furnish a wealth of material on which to base much of the work of the auxiliary class.

Drawing

The pupils of the lower classes of the auxiliary school should have work in free hand drawing, making sketches in black and white and in color of the objects they have seen in their nature walks, or of the common scenes in life. They may color outline drawings that have been prepared or furnished by the teachers. The older children, especially the boys, may take work in elementary mechanical drawing, making sketches of some of the things they are to make in the manual work. Such boys as are to enter some special trades may be given such instruction in drawing as will help them in their trades. This should consist largely of the making and reading of simple drawings made actual size or to scale. There will be little need of a knowledge of perspective drawing in such work as the mentally deficient boys will do.

Work in modelling is also valuable for developing ideas of form.

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Work in Geography and History

The elementary ideas in geography should be taught by leading the children to observe the natural forms of the locality and by moulding these forms on the sand table. They should also gain elementary ideas of the world from simple geographical readers, of which there are several excellent ones on the market.

The main facts in the history of the nation should be gained from stories told by the teacher, or from the elementary historical readers. The children may gain many ideas by dramatizing some of the events in history.

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Chapter Ten

MENTAL TESTS

In order to determine the degree of departure from normal mentality in backward and abnormal children, sets of tests have been devised by different workers in this special field of psychology. The best of these tests are arranged systematically in a graded series, so that each group of tests represents an increase in difficulty over the group designed for the next lower stage of mentality. The most usable of these sets of graded tests and the best adapted for use in testing children assigned to special schools, are doubtless those of Sante de Sanctis, of Rome, and those of Binet and Simon of Paris. The work of these investigators is highly commended by Meumann.[1]

de Sanctis's Tests

These tests are designed for testing children from 7 to 16 years of age, and they are so graded as to determine the degree of defect in mentally sub-normal children.

1ST TEST. The child is shown six glass balls, or, according to Goddard, five wooden balls, 50 mm. in diameter, of different colors, with the command by the experimenter: "Give me a ball." The time the child takes in responding is recorded by a stop watch. The balls are then concealed behind a screen or under a cloth.

[1]Meumann, Vorlesungen, Vol. I., p. 388.

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2ND TEST. The six balls are again shown. The experimenter asks: "Which ball did you give me?" The reaction time is again measured.

3RD TEST. Kindergarten cubes of the same size, together with 3 balls and 2 pyramids (Goddard says 3 pyramids and 2 parallelopipeds) are placed on a table. The child is shown a cube and directed to find one like it. The reaction time is taken.

4TH TEST. From a card on which are printed figures of triangles, rectangles and squares, the child is asked to point out all the figures that are similar in form to the cube that was just shown him in the previous test. Record number of errors and the time.

5TH TEST. Twelve cubes of different sizes are placed at different distances on a table. The child is asked this question: "How many things are there, which is the largest, and which is the farthest away from you?" Take the time. Notice errors and omissions. This question requires a three-fold response.

6TH TEST. The cubes are concealed by the screen and these questions are asked: "Are the largest cubes also the heaviest? Are the cubes that are farthest away the smallest?"

The ability to pass only tests Nos. 1 and 2 is indicative of the highest grade of mental defect, i. e., Idiocy. The ability to pass Nos. 1, 2, 3, 4, only, indicates the next lower grade of mental defect, i. e., Imbecility.

The mastery of the fifth test, but failure to master the sixth is indicative of the lowest grade of mental defect, i. e., Feeble-mindedness.

Ability to pass all six tests, indicates the possession of normal mentality.

de Sanctis believes that by his tests the following abilities of the child can be ascertained.

1. Capacity of adaptation to different situations.

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2. Memory for color.

3. Ability to distinguish colors and forms, and the recognition of the same, as well as the perception of identity in a plane and a solid figure.

4. The persistence of attention.

5. The ability to count objects and to judge their quantity, size, and distance.

6. The ability to form a judgment as to the quality of objects when they cannot be directly perceived by the senses and must be judged from abstract notions; by this means, in addition to imagination and judgment, the power to generalize and to form abstract ideas is tested.

7. Quickness of perception, of reflection, and of action.

The first five tests were given by Dr. Montessori to 45 mentally defective children, and the results were in close agreement with the general clinical and pedagogical characterization of the children.

The sixth test, according to the view of Dr. Montessori, is better when broken up into several simpler tests.

Professor Toscano gave the tests in a school for normal pupils and found them well adapted for ascertaining the pupils who were mentally weak. He thought the fifth test was too easy in comparison with the fourth.

de Sanctis gave the tests to 40 children in his school for the feeble-minded, and found, as in the cases previously cited, that the results agreed well with the clinical and pedagogical characteristics of the children.

For adults and the older feeble-minded persons, he found the sixth test too easy. He suggests the following modifications: Instead of allowing a minute long pause between the several tests, only 40 seconds is allowed between tests No. 1 and No 2. The subject points out

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the squares in the fourth test with a pencil or stick. The sixth test is thus changed: a. "Do large *things* weigh more or less than small things?" (The word "cubes" is avoided as well as the word "objects.")

b. How does it happen that sometimes small things weigh more than large? This question is not asked unless the subject answers the first question correctly.

c. Do things that are far away look larger or smaller than things that are near?

d. Do they merely look smaller or are they really smaller.

Goddard thinks that in these tests the effect of training is not entirely eliminated. He thinks that a feeble-minded child who has been well trained can pass Test No. 6.

It would seem that these tests might be used to make a tentative census of the feeble-minded members of a group of school children or other persons. This tentative judgment could be confirmed in doubtful cases by more extended tests.

Binet and Simon Tests

In their 1905 Series of Tests, Binet and Simon advance the following classification of mental defectives as determined by their tests.

A. IDIOTS[2] (inarticulate), mental development never exceeding that of normal child of two years.

1. VEGETATIVE IDIOT WITH NO RELATIONAL ACTIVITY.

2. IDIOT WITH SOME POWER OF VISUAL CO-ORDINATION. Eyes follow a lighted match when it is moved before the subject's face.

[2] See E. B. Huey's chapter on Classification and Terminology in his "Backward and Feeble-minded Children." Baltimore, 1912.

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3. IDIOT WITH POWER OF PREHENSION. Subject has power to grasp small cube when it is placed in contact with the palm or back of his hand. (Tactual stimulus.) Also has power to reach for an object when held at some distance away. (Visual stimulus.)

4. IDIOT WHO RECOGNIZES FOOD. Subject selects a piece of candy or cookie and rejects a piece of wood when urged to eat.

5. IDIOT HAVING IMITATIVE POWER. Subject clasps hands and makes different gestures in imitation of the movement of a second person.

B. IMBECILES. (Corresponding to children between 2 and 7 years of age.)

B. 1. IMBECILES WITH ABILITY TO RECOGNIZE OBJECTS BY NAME AND TO NAME OBJECTS.

a. Real Objects

1. Points out eyes, hair, nose, mouth, tongue; sometimes harder things "such as heart, eyebrow, elbow."

2. From a number of things on a table brings one designated.

3. Ask for something that is not in the group to test suggestibility of subject.

b. Objects in Picture

1. Points out certain objects in simple colored pictures as their names are called.

2. Ask subject to point out the "jabberwock" or some other fictitious object, testing how he responds to suggestion.

c. Naming Objects

Names object as they are pointed out in simple colored pictures in response to such questions as,

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"What is this?" or, "What is the boy doing?" Test a, b, and c require about the same degree of mentality.

B. 2. IMBECILES WITH ABILITY TO MAKE COMPARISONS.

a. 1. Test with two lines of different length, 30 and 40 mm., the longer line now on right, now on left until sure that subject can or cannot make the comparisons correctly.

2. Test with lines of same length; ask subject which is longer or shorter, and see if he falls into the trap.

b. Test subject's memory by asking him to repeat a series of three figures; as, 4, 7, 6 or 5, 6, 8, which are pronounced distinctly to him by the person testing.

c. Test subject's ability to compare weights, two pill boxes, weighing 3 and 12 g., respectively. Correct comparison is made by lifting the two weights simultaneously, one in each hand.

B. 3. IMBECILES WITH ABILITY TO REPEAT SENTENCES.

Binet's test for this degree of mentality consists of eight sentences of about 15 words each, (Test 15, 1905 Series) similar to the following:

We get up in the morning, play all day, and go to bed at night.

The tester should observe whether the omissions and changes indicate a slip of the memory or a failure to comprehend the meaning of the sentence. The latter is indicative of defective mentality.

C. FEEBLE-MINDED. MORONS, with a mental development above an imbecile but not exceeding that of a normal child of twelve years.

C. 1. MORONS WITH CAPACITY TO STATE DIFFERENCES.

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Ask the subject to state the difference between a fly and a butterfly; paper and cloth; wood and glass. State the questions so as to make them as intelligible as possible. Be sure the subject knows what the objects are in each case.

C. 2. MORONS WITH ABILITY TO MAKE SERIAL ARRANGEMENT.

Have five little boxes weighing 3, 6, 9, 12, 15 g., respectively. Ask subject to arrange them in order of their weight. Allow three trials; two must be correct to pass the test.

Binet-Simon Graded Tests

The Binet scale of graded tests for measuring mentality, as worked out by Professor Binet and Dr. Simon, is fully described in an article written by them in the 1908 volume of *L'Année Psychologie*. The scale establishes norms of mentality for each year from three to thirteen inclusive.

Credit for Answering the Test

The child is credited first with the mental age of which he has answered all of the questions but one; for every five questions that he can answer beyond that point, no matter where they are found, the child is credited with an additional year. "This," as Goddard says, "gives a flexibility to the system which overcomes any peculiarities of training that the child may be subject to, and so he measures up to his proper grade regardless of any accident in his training."

Dr. H. H. Goddard, Director of the Psychological Laboratory of the Training School at Vineland, New Jersey, was the first psychologist in America to bring the Binet-Simon 1908 scale to the attention of the public. He translated and published these tests in the

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magazine, Training School, in January 1910. Since then the tests have been used in a number of places. Goddard has tested with this scale some four hundred mentally deficient and some two thousand normal children, publishing the results of the two investigations in the Pedagogical Seminary for September 1910 and June, 1911, respectively. Their most extensive use on public school children has been made in the public schools of Philadelphia.

The Binet Scale, Dr. Goddard thinks, is the most accurate method we have of determining intellectual ability in children. He thinks that by the use of this scale any superintendent of schools may examine the pupils under his charge and "determine with considerable accuracy whether each and every child is in the grade that his mental ability actually warrants. Of course, it is evident that a child may have the mental ability of eight years, but if he has never been to school he must be in the first grade for a time at least. But on the other hand, he should not be in the third grade two years later when he is ten years old mentally. As the years go by, he should get through with the mechanics of the learning process in the elements, and be up to what his mentality warrants."

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Pictures Used in Making Binet Tests.

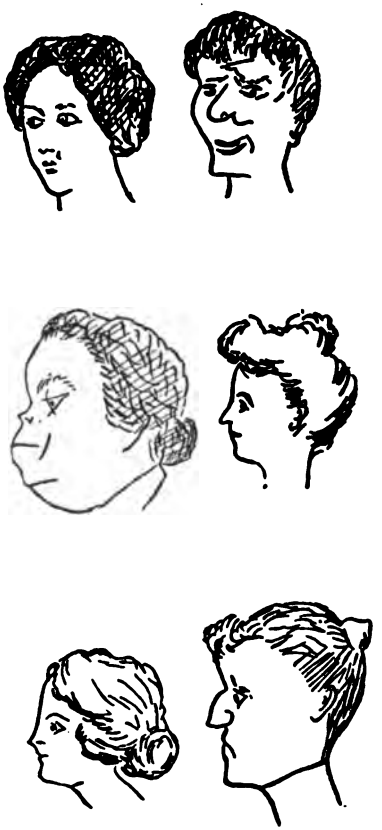

Figure 1. Binet Test Age VI. No. 3. No. 5 in Revised Scale.

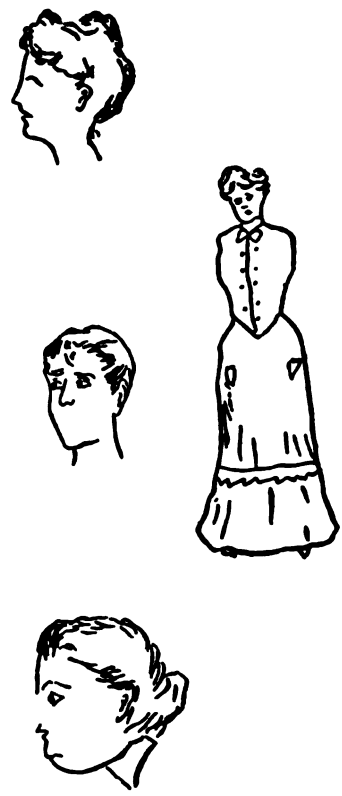

Figure 2. Binet Test Age VII. No. 1. No. 3 in Revised Scale.

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Tests of Mental Development as used in the Philadelphia Schools

(After Binet and Simon --- Goddard. See Vol. VI, No. 11, "The Training School," Vineland, N. J.)

(a) *The examiner should use, so far as possible, the exact language of the test.*

(b) *Unless otherwise indicated, all parts of a test must be answered correctly to pass.*

(c) *For test materials see appendix.*

(d) *The following conventions should be observed in estimating mental development as indicated by the tests:*

(1) *Credit the subject with the mental development of the highest age for which he has succeeded in all the tests but one.*

(2) *Advance him one year for every five higher tests passed; e. g., John is nine years old. He fails in two of the nine year tests. He should thus be classed as intellectually eight years old. But he has done three of the nine year tests and three of the ten year tests, making six in all. He is, therefore, advanced a grade and recorded as normal.*

(e) *The child should be placed at ease and encouraged to answer freely, but no specific help other than as indicated in the tests should be given.*

3 YEARS[3]

1. "WHERE IS YOUR NOSE?" "EYES?" "MOUTH?"
   May be answered by a gesture.....
2. "SAY AFTER ME, 'IT RAINS. I AM HUNGRY.'"
   There must not be a single error.....
3. "SAY AFTER ME, '7-2; 6-3; 8-5.'"
   Pronounce the figures distinctly, one-half second apart, and without emphasis on any one figure. The test is passed if two numerals are repeated correctly once out of three trials.....
4. "WHAT DO YOU SEE IN THIS PICTURE?"
   Use any interesting picture of objects and actions within the range of childish experience. Suitable pictures may be found in primary reading books. Kuhlmann uses pictures found in Jingleman Jack, by James O'Dea, New York and Chicago, 1901. The child should enumerate four things in the picture shown. He is not required to describe any actions.
5. "WHAT IS YOUR NAME?".....
   Every child of three knows his own name. He does not always know his family name.

4 YEARS

6. "ARE YOU A BOY OR A GIRL?".....
7. "WHAT IS THIS?"
   Show successively knife, key, penny.....

[3] See Record Blank in Appendix, p. 168.

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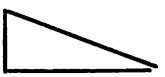
8. "SAY AFTER ME, '7-4-8.'"
9. "WHICH LINE IS LONGER?".....
   Two parallel lines about 3 centimeters apart; one 5 centimeters, the other 6 centimeters long.

5 YEARS

10. "WHICH IS HEAVIER?"
    Use pill-boxes of uniform size weighted with sand or shot; can be made up by any druggist. To identify the weights without disclosing them to the child, the initial of the weight should be placed upon each box, *e. g.*, S on 6 gram box, F on 15 gram. box. Compare 3 and 12 grams; 6 and 15 grams.....
11. "COPY FIGURE OF A SQUARE OF 3 OR 4 CENTIMETERS," WITH PEN AND INK.
12. "MAKE A FIGURE LIKE THIS CARD FROM THESE PIECES."
    Place a visiting card on the table;
    nearer the child place the two pieces, thus:—



13. "HOW MANY PENNIES ARE HERE?"
    Place four pennies in a row. Have the child count them with his finger.....

6 YEARS

14. "HOLD UP YOUR RIGHT HAND. SHOW ME YOUR LEFT EAR."
    .....
15. "SAY AFTER ME, 'WE GET UP IN THE MORNING; AFTER BREAKFAST WE WORK; AT NIGHT WE GO TO BED.'".....
16. "WHICH IS PRETTIER?"
    See Fig. 1. Page 96. Show heads in pairs.....
17. "WHAT IS A HOUSE?" "A FORK?" "A TABLE?" "A CHAIR?" "A HORSE?"
    Kinds of response: 1, "A fork is a fork," or by pointing to an object. 2. In *terms of use*,—"A fork is to eat with." 3. *Better* than by use. This includes answers that describe the thing or even begin with "it is a thing," "it is an animal," etc.
    Three definitions by *use* pass.....
18. "DO YOU SEE THIS KEY? PUT IT ON THAT CHAIR. THEN SHUT THE DOOR. AFTER THAT BRING ME THE BOX THAT IS ON THE CHAIR. REMEMBER, FIRST THE KEY ON THE CHAIR, THEN CLOSE THE DOOR, THEN BRING ME THE BOX."
    Child must execute the entire commission. Give no further help than here indicated.....

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19. "How old are you?"
Answer in years passes.....
20. "Is this morning, or is it afternoon?"
If the time is afternoon, put the question, "Is this afternoon or morning?".....

7 YEARS

21. "What is missing in this picture?"
See Fig. 2. Page 96. Show pictures one at a time. Three correct answers pass.....
22. "How many fingers on your right hand?" "How many on your left hand?" "How many on both hands?"
Answers must be given without hesitation and exactly right without counting.....
23. "Copy these words: 'The little Paul.'"
Use pen and ink. Passed if readable by one who is ignorant of the copy.....
24. "Copy this figure."
A diamond about the size of square used for age five. Use pen and ink. Passed if recognizable as intended for a diamond-shaped figure.....
25. "Say after me, '4-7-3-9-5'".....
26. "What do you see in this picture?"
See test 4. Same picture as used in test 4. Child should now *describe* actions or things instead of simply enumerating.....
27. "Count these pennies."
Place thirteen pennies in a row and have child count them with the finger. Finger must touch the piece as the child names the number. No piece must be counted twice and none omitted.....
28. "What is this?"
Show successively penny, nickel, dime, and quarter.....

8 YEARS

29. Three Houses on Fire. New York, Sept. 5. A big fire in Hastings, last night destroyed three large houses in the centre of the village.

"Seventeen families are without shelter. The loss exceeds thirty thousand dollars.

"While rescuing a child in his cradle, a barber's boy has had his hands very seriously burned."

Have child read the selection. Wait a few seconds and then say, "Tell me what you have read." Write down

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exactly his words, then count the number of memories that he has expressed. The possible memories are as follows: Three—houses—on fire—New York—September 5th—big fire—destroyed—last night—etc.

Two memories pass.....

30. "How much are these stamps worth?" or "How much money to buy these stamps?" "Count."
Arrange 3 one-cent stamps and 3 two-cent stamps in a row. Should be done within ten seconds without any error.....

31. "What is this color?"
Show successively the four colors, blue, red, green, yellow. Should be done in six seconds.

32. "Count backwards from twenty to one."
Should be done within twenty seconds, and only one mistake or omission or transposition allowed.....

33. "Write 'the pretty little girls.'"
Passed if readable by one who is ignorant of the copy....

34. "What is the difference between a butterfly and a fly?" "Wood and glass?" "Paper and cloth?"
The question may be differently put so as to make it as intelligible as possible, *e. g.*, "Why are they not alike?" etc. Two at least of the answers must be correct. Allow two minutes.....

9 YEARS

35. (*a*) "What day is to-day?" (*b*) "What month?" (*c*) "What day of the month?" (*d*) "What year?"
For question (*c*) answer within three days of correct date passes.....

36. "Name in order the days of the week."
Allow ten seconds.....

37. Play store, using real money. Child is storekeeper. Buy from him stamps that cost 9 cents. Give child a quarter. Child must actually give 16 cents change as well as say it. See Revision.....

38. "What is a house?" "A fork?" "A table?" "A chair?" "A horse?"
See test 17. Accept only definition *better* than by use....

39. "Tell me what you have read."
See test 29. Six memories pass.....

40. Use pill-boxes weighing 6, 8, 12, 15 and 18 grams. (See test 10.) Place the five boxes on the table in front of child and explain that they do not all weigh alike, and that he is to lift them one at a time, and put them in order from the lightest to the heaviest.
Record exact order in which child has placed boxes.
Three trials allowed; two of these must be absolutely correct.
Allow three minutes.....

10 YEARS

41. "Name the months of the year."
To be done in fifteen seconds. Allow one omission or transposition.....

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42. "WHAT IS THIS?"
Use cent, nickel, dime, quarter, half dollar, dollar, two dollars, five dollars, ten dollars.
Pieces should be on table in a row, but not in regular order of value. Have child point with finger and name as he points.....

43. "MAKE A SENTENCE USING THE WORDS, 'PHILADELPHIA, MONEY, RIVER.'"
There are three forms of answer: (1) three separate sentences; (2) two ideas united by a conjunction; (3) a single idea involving the three words. Only the last two pass. Allow one minute.....

44. "WHAT OUGHT A PERSON TO DO:
(*a*) "WHEN HE HAS MISSED THE TRAIN?"
(*b*) "WHEN HE HAS BEEN STRUCK BY A COMPANION WHO DID NOT DO IT PURPOSELY?"
(*c*) "WHEN HE HAS BROKEN SOMETHING THAT DOES NOT BELONG TO HIM?"
(*d*) "WHEN HE IS DETAINED SO THAT HE WILL BE LATE FOR SCHOOL?"
(*e*) "BEFORE TAKING PART IN AN IMPORTANT AFFAIR?"
(*f*) "WHEN ASKED HIS OPINION OF SOME ONE WHOM HE KNOWS ONLY A LITTLE?"
(*g*) "WHY DOES A PERSON EXCUSE MORE EASILY A WRONG ACT COMMITTED IN ANGER THAN A WRONG ACT COMMITTED WITHOUT ANGER?"
(*h*) "WHY SHOULD A PERSON JUDGE ANOTHER MORE BY HIS ACTS THAN BY HIS WORDS?"
Allow twenty seconds to each question. Five correct answers pass.....

11 YEARS

45. "I AM GOING TO GIVE YOU SOME SENTENCES IN WHICH THERE IS NONSENSE. LISTEN CAREFULLY AND SEE IF YOU CAN TELL ME WHERE THE NONSENSE IS."
These are the sentences:
1. An unfortunate cyclist has had his head broken and is dead from the fall: they have taken him to the hospital and they do not think that he will recover.
2. I have three brothers, Paul, Ernest and myself.
3. The police found yesterday the body of a young girl cut into eighteen pieces. They believe that she killed herself.
4. Yesterday there was an accident on the railroad. But it was not serious: the number of deaths is only 48.
5. Some one said, "If in a moment of despair I should commit suicide, I should not choose Friday, because Friday is an unlucky day and it would bring me ill luck."
Read the sentences slowly. Allow two minutes for the entire test. Three good answers pass.....

46. "USE IN ONE SENTENCE THE WORDS 'PHILADELPHIA, MONEY, RIVER.'"
See test 43. Only last form of answer passes.

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47. "SAY AS MANY WORDS AS YOU CAN IN THREE MINUTES,—AS TABLE, RUN, BOARD, CARRIAGE, BIG. SOME CHILDREN HAVE NAMED TWO HUNDRED WORDS."
Record words as named. Sixty words pass. Duplications not to be counted.....

48. "WHAT IS CHARITY?" "JUSTICE?" "GOODNESS?" Two good definitions pass. They must contain the essential idea, even though poorly expressed.....

49. "MAKE A SENTENCE OUT OF THESE WORDS."

Hour—for—we—early—at—park—an—started, the.

To—asked—paper—my—have—teacher—correct—the—I.

A—defends—dog—good—his—bravely—master.

Place the printed words before the child. Have him give the sentence orally. Allow one minute for each sentence Two given correctly pass.....

12 YEARS[4]

50. "SAY AFTER ME, '2-9-4-6-3-7-5.' '1-6-9-5-8-4-7.' '9-2-8-5-1-6-4.'"
Tell the child there will be seven figures. Allow three trials. One correct answer passes.

51. "GIVE AS MANY WORDS AS YOU CAN THINK OF THAT WILL RHYME WITH *day, spring, mill.*"
Explain and illustrate what is meant by a rhyme. Allow one minute. Three rhymes for any one of the words passes.....

52. "SAY AFTER ME, 'ERNEST IS PRAISED VERY OFTEN FOR HIS GOOD CONDUCT. I BOUGHT A BEAUTIFUL DOLL FOR MY GOOD LITTLE SISTER.' 'CHILDREN, IT IS NECESSARY FOR US TO WORK VERY HARD FOR A LIVING. YOU MUST GO TO YOUR SCHOOL EVERY MORNING.'"
One of these combinations of sentences to be repeated without error.....

53. "I SHALL READ YOU A STORY CONTAINING A QUESTION. LISTEN CAREFULLY AND GIVE ME THE ANSWER WHEN I FINISH."
1. "A person who was walking in the forest at Fontainebleau suddenly stopped much frightened and hastened to the nearest police and reported that he had seen hanging from the limb of a tree a————" (after a pause) "what?"
(2) "My neighbor has been having strange visitors. He has received one after the other a physician, a lawyer and a clergyman. What has happened at the house of my neighbor?"
Both questions to be answered correctly.....
The answer to No. 1 is "a dead man."

[4] The test for Thirteen Years is omitted as not being suited to its purpose.

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Revision of the Binet Scale

In the April 1911 number of the *Bulletin de la Société Pour l'Etude Psychologique de l'Enfant*, Professor Binet has established a revision of his 1908 scale of tests. In this revision he has made three significant changes:

1. He has five tests for each age, with the exception of the five year level where he has retained the original number four.

2. He has transposed some questions from one year to another. Goddard does not think these changes are always for the better.

3. He has omitted some of the questions that were dependent on school training largely; such as the reading and writing tests.

In regard to the revised scale, Goddard says:

"The results of our experience with the tests on four hundred feeble-minded and two thousand normal children, convince us that Binet's original scale was quite as correct as his new one; but that some improvement can be made in certain other questions. . . . The new scale will simply be more convenient because it will (see The Training School, June 1911, p. 58), obviate straggling; that is, where a child, for example, stops at seven years, but gets enough credits to make him eight, some of the credits coming from nine and some from ten. The tendency under the new scale will be to answer the eight year questions and stop there, doing none in nine or ten."

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Revised Binet Scale, Amended by Goddard[5]

No Change

III. Mentality of Three Years.[6]

1. Touches nose, eyes, mouth, as directed
2. Repeats: It rains. I am hungry
3. Repeats 7, 2
4. Sees in picture different objects in response to question: What do you see here?
5. Gives the family name

IV. Mentality of Four Years.

1. Knows sex, in answer to question: Are you a girl or a boy?
2. Recognises a knife, key and penny
3. Repeats three figures as 7, 4, 8
4. Compares lines differing by a centimeter

V. Mentality of Five Years.

Binet New	Binet Old		Results in G's Tests
1	1	1. Compares weights of 3 and 12 grams; 6 grams and 14 grams	S. F. 32– 2
2	2	2. Copies figure of square	23–11
3	new	3. Repeats: Sentences of ten syllables: His name is John. He is a happy boy	new
4	4	4. Counts four pennies	30– 4
5	3	5. Rearranges a rectangle that has been cut diagonally into two triangles, called game of Patience	20–12

VI. Mentality of Six Years.

1	7	1. Knows whether it is morning or afternoon	30–12
2	4	2. Defines, in terms of use, the words fork, table, chair, horse, mamma	35– 6
VII 3	5	3. Executes three commands given simultaneously	25– 7
VII 1	1	4. Shows right hand, left ear	35– 8
5	3	5. Chooses prettier from several pairs of figures	31– 6

VII. Mentality of Seven Years.

VI 4	7	1. Counts 13 pennies	94– 5
2	6	2. Describes certain pictures	83–25
VIII 3	1	3. Notes omissions of eyes, nose, mouth or arms from certain pictures	87– 9
VI 3	4	4. Draws diamond from copy so it can be recognized	95– 8
5	VIII 3	5. Names colors, red, blue, green, yellow	97– 5

[5] Used by permission of Dr. H. H. Goddard.

[6] See Record Blank in Appendix, p. 168.

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		VIII.	**Mentality of Eight Years.**	
1	6	1.	Compares two objects from memory, butterfly and fly; paper and cloth; wood and glass	87– 2
2	4	2.	Counts backwards 20 to 1	90– 1
omitted	IX 2	3.	Repeats days of week	85– 4
VII 4	2	4.	Counts stamps, three ones and three twos	79–14
5	VII 5	5.	Repeats five numerals, 7, 9, 1, 4, 6	36– 7
		IX.	**Mentality of Nine Years.**	
1	3	1.	Makes change, 20c. 4c	33–23
2	4	2.	Defines in terms superior to statements of use, fork, table, chair, horse, mamma	45–27
VIII 4	1	3.	Knows date	48– 7
4	XI	4.	Repeats names of months in order	48– 6
XI	6	5.	Arranged in order of weight, boxes of same size and appearance weighing 6, 9, 12, 15 and 18 grams in three minutes	44–11
		X.	**Mentality of Ten Years.**	
IX 3	2	1.	Knows money; 1c, 5c, 10c, 25c, 50c, $1, $2, $5, $10	104–5
2	new	2.	Copies a design	new
—	new	3.	Repeats six figures: 8, 5, 4, 7, 2, 6	new
4	4	4.	Answers questions of judgment: What ought one to do when one has missed a train or been unintentionally struck by a playmate or has broken an object belonging to another?	98– 8
5	3	5.	Uses three given words in not more than two sentences	92–17
		XI.	**Mentality of Eleven Years.**	
X 3	1	1.	Sees absurdity in three out of five statements or anecdotes	48– 4
XII 2	2	2.	Uses 3 words in a single sentence	39–14
XII 3	3	3.	Gives 60 words in three minutes	35– 3
XV 2	2	4.	Gives three words that rhyme with day, hill, ring	45– 5
XII 5	5	5.	Arranges correctly shuffled words of eight-word sentences, two out of three, one minute being allowed	35– 9
		XII.	**Mentality of Twelve Years.**	
XV 1	1	1.	Repeats seven numerals in order when heard once	37– 7
XII 4	X 4	2.	Defines charity, justice and goodness	5– 0
	3 revised	3.	Repeats sentence of 26 syllables	15–21
1	new	4.	Resists suggestion	new
XV 5	4	5.	Problems of various facts	40– 3

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		XV. Mentality of Fifteen Years.
1		1. Interprets picture 2. Changes hands of clock 3. Interprets codes 4. Gives opposites of certain words
		Mentality of Adult Years
1	XIII 1	1. Cuts triangle from paper that is folded in four; ask subject to draw picture of way triangular piece will look when unfolded
2	XIII 2	2. Reversed Triangle. Images and draws new form produced by joining transposed pieces of a diagonally divided visiting card
3	XIII 3	3. Give differences between abstract terms; pleasure and honor; evolution and revolution; event and advent; poverty and misery; pride and pretension
4	new	4. Gives difference between president of a republic and a king
5	new	5. Gives sense of a passage read to him

N. B. All questions under any age must be answered to pass that age instead of all but one as on the old scale.

Explanation of the Revised Binet Scale

The numbers in the second column refer to the place the questions had in the 1908 scale; numbers in the first line to place of the question in the revised scale; e. g., VIII. 3. (Repeats days of week) was IX. 2, in the 1908 scale. Binet omits it in the revised scale.

The numbers in the first column refer to the place of the questions in Binet's Revision; those in the third column to Goddard's Revision. The figures at the right of the questions; e. g., 32-2, refer to results of Goddard's test with the scale on 2,000 school children; 32 represents the number of children who passed the test question; 2 the number who failed.

Goddard has modified the form of three questions:

IX. 1. The old form used by Goddard giving the correct change for a quarter to a person making a 9c. purchase was found too hard; paying for a 4c. purchase

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with two ten-cent pieces, the child giving the correct change, is thought to be easier.

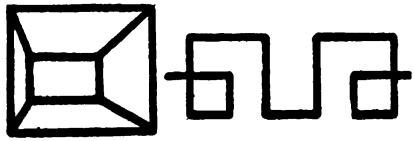
IX. 2. It is now proposed to accept as a definition better than use, such definitions as: the chair has four legs, the table is made of wood.

XII. 3. A sentence of twenty-three syllables is substituted for the old sentence of twenty-six syllables.

Goddard recommends the following sentences: I saw in the street a pretty little dog. He had curly brown hair, short legs, and a long tail.

He adds the following questions:

X. 2. The following designs are exposed ten seconds, and the child then draws them from memory, testing visual memory, analytical power, and attention.



XII. 4. Prepare a booklet of six pages. On the first page draw in ink two horizontal lines; the one to the left two inches long, the one to the right two and a half inches. On second page, left line is two and a half; right, three inches. Third page, left line three and right one, three and a half inches. On the three remaining pages all lines are three and a half inches long. The lines on each page are in the same straight line and separated by a half inch.

The idea of the test is this: The child having said the right hand line is the longer for three times, will he continue to say the same when the lines are alike or will he "resist the suggestion"? The form of the question for the first two pages should be: "Which is the longer?" But for the others merely say: "and then."

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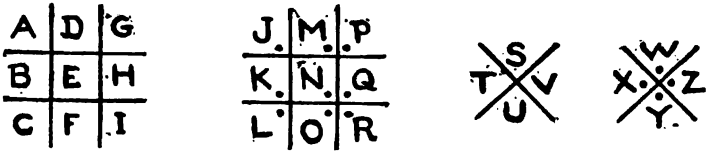
XV. The same pictures are to be used as in III. 4 and VII. 2. The subject passes the test if he interprets the feeling of the picture by expressing "some word of sympathy, fear, sorrow, joy or other feeling."

XV. 2. The subject arranges the clock hands for the hour (1) 6:20 and (2) for 2:56. "The child must not see a watch or clock. It is a test of imaging power."

XV. 2. Use of a code of characters.



After showing subject how to use cipher, e. g., "war" would be written remove key and have him write: "Caught a spy" in this code. One error is allowed, every wrong or incomplete symbol being marked an error.

XV. 4. The subject is asked to write the opposite of the following words: 1, good; 2, outside; 3, quick; 4, tall; 5, big; 6, loud; 7, white; 8, light; 9, happy; 10, false; 11, like; 12, rich; 13, sick; 14, glad; 15, thin; 16, empty; 17, war; 18, many; 19, above; 20, friend.

Besides the obvious answers the following are accepted as right or half right:

2, in or indoors (half); lazy or slowly (half); 4, little or low (half); 5, short (half); 6, soft or low (right); whisper (half); 9, sorry or sorrow (half); 10, right or truth (half); 11, dislike, unlike or hate (right); 13, healthy (right); 14, mad (right); 15, broad (half); 16, filled (right); 18, none (right); 19, under (right).

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The equivalent of 17 correct answers must be given.

Goddard sugggests having the words printed on a sheet of paper in a vertical column with space at the side in which the opposite words may be written.

Tests for Adults[7]

Adult 4. The subject is told that there are three differences between a President of a Republic and a King, and he is asked to name them.

"The answer should contain the three ideas; Royalty is (1) hereditary, (2) lasts for life, and (3) the monarch has extended powers. The President is (1) elected, (2) for a definite term and (3) his powers are usually less extensive than those of a king."

Adult 5. Reading selection to subject of which he is to tell the substance of what is read.

Binet explains that the word adult may mean anyone over 15 years.

The following paragraph should be read slowly, distinctly and with expression: "One hears very different judgments on the value of life. Some say it is good, others say it is bad. It would be more correct to say that it is mediocre; because on the one hand it brings us less happiness than we want, while on the other hand the misfortunes it brings are less than others wish for us. It is the mediocrity of life that makes it endurable; or, still more, that keeps it from being positively unjust."

The subject is given credit for passing the test if he gives the central thought, e. g., "Life is neither good nor bad, but mediocre, because it is inferior to what we wish and not as bad as others wish for us."

[7]See also Wallin's "A Practical Guide for the Administration of the Binet Simon Scale for Measuring Intelligence." Psychological Clinic, December 15, 1911.

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Goddard thinks that Adult Tests 1 and 2, test special traits rather than universal. In a mixed group of educators and scientists, six out of twenty passed No. 1; in a group of 18 psychologists, twelve succeeded.

"The great need now," says Dr. Goddard, "is to get suitable tests up to age twenty."

Wallin criticises the Binet scale at length in his article "Human Efficiency" in the Pedagogical Seminary for March 1911. He maintains that the scale measures acquired, as well as native, mental capacity. To his way of thinking, "pure native capacity after the first few months of life, is a pure figment of the imagination."

Wallin finds that there is a tendency among subjects in places where the scale has been in use sometime to coach one another. He recommends that this difficulty be met by devising substitute or variant forms of equal difficulty for some of the tests.

Wallin also points out in this article that there is great need of a motor scale of development or a combined intellectual-motor scale. A child who is not normal intellectually, may be normal on the motor side and thus may be fitted for certain kinds of industrial work for which he should be trained in school. It is obvious that such a scale is much needed.

Dr. Lewis M. Terman,[8] who, with the assistance of H. G. Childs, has tested some four hundred children in the vicinity of Stanford University, California, suggests certain modifications of the scale and also a "new method for calculating 'test age,' which he believes is a decided improvement over that used by Binet. The tests of a year-group are given a combined value of 1 and the unit value of each question in a group is determined by dividing 1 by the number of tests in that group, thus making it possible to retain an equal

[8]See Article in Psychological Clinic, Dec. 15, 1911. See also Articles in Journal of Educational Psychology, 1911 and 1912.

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number of tests in the different groups without giving undue weight to any one test in the estimation of test age."

Dr. Terman well says, "In order to make the tests of the greatest practical use, it will be necessary to apply along with such measuring scales the newly developed tests of physiological age. Unless this is done, children are certain to be grossly misjudged as to native ability, a mistake which in individual cases may be fraught with the most serious consequences. In justice to the child, the normality of whose intelligence has been questioned, tests for physiological age should always be applied before institutional treatment is recommended, and perhaps occasionally after commitment."

Dr. Terman also thinks that "it is especially desirable that age norms be secured for tests" of the general nature of some of those used by Healy[9] and Fernald in the Chicago Juvenile Court.

Dr. Leonard P. Ayres[10] criticises the Binet-Simon tests as follows:

"These tests are designed to measure native ability, not scholastic attainment. They aim to provide the investigator with an instrument which will enable him to form a trustworthy estimate of the child's capacity for adapting himself to his social environment, and so are designed with special reference to evaluating his judgment, good sense, initiative, and adaptability.

"Their value as a measure of this kind of intellectual capacity depends on whether or not they really test the qualities they aim to test and with what degree of accuracy. It is the opinion of the writer that they may

[9] See Tests for Practical Mental Classification Psychological Review Publications. The Psychological Monographs, Vol. XIII, No. 2, March, 1911, pp. 1-53.

[10] See Psychological Clinic, November 15, 1911.

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be greatly improved in both respects. His criticisms fall under five general heads:—

"1. The tests predominantly reflect the child's ability to use words fluently, and only in a small measure his ability to do acts.

"2. Five of them depend on the child's recent environmental experience.

"3. Seven depend on his ability to read and write.

"4. Too great weight is given to tests of ability to repeat words and numbers.

"5. Too great weight is given to 'puzzle tests.'

"6. Unreasonable emphasis is given to tests of ability to define abstract terms.

"Two-thirds of the Binet-Simon tests are tests of the child's ability to use words, and only one-third tests of his ability to do acts. Among the reasons why certain of the tests fall short of providing satisfactory criteria for the judging of native ability are the following:

"1. They overlook the fundamental difference between the multiple and complex stimuli which contribute to the motivating impulse in coping with real problems and the few and simple ones entering as factors in answering questions or obeying commands.

"2. The importance of the emotions and habit in influencing action is disregarded.

"3. Real equality is attributed to verbal equality.

"4. Ability to answer many of the questions depends on the child's daily environmental experiences which differ radically among different children.

"5. Ability to meet the requirements of several of the tests depends directly on the excellence of the child's schooling.

"6. Several tests depend on the mere ability to repeat words and numbers.

"7. Counting backwards and solving puzzles constitute several tests.

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"8. Several tests turn on the ability to express in words comprehension of difficult, abstract terms."

As has been stated elsewhere, Kuhlmann shows that many of Ayres' points of criticism are not well taken.

Miss Katherine L. Johnson, of England, examined 4 girls six years old; 41, seven years old; 22, eight years old; 30, nine years old; 38, ten years old; 24, twelve years old; 23, thirteen years old; 4, fourteen years old and 3 girls over fifteen years old by the Binet revised scale. The children seemed to find the tests even harder than did American children of similar age.

Miss Johnson seems to regret the fact that Binet has omitted tests for the eleven, thirteen and fourteen year levels.

She also is of the opinion that unless additional credit is given for passing tests of higher level, one year for five questions and two years for ten extra questions, *the judgment would be too severe.*

Miss Johnson found that often a girl may fail in the tests of a level lower than that of her age, and yet pass those of a higher level; thus two girls of nine could not pass the nine year tests, yet accomplished those of the ten year level, and three other girls failed on these nine year tests who were able to pass tests of higher levels. Two girls failed on the ten year level but passed those of the twelve year level. One girl of twelve years failed on the level of her age, but passed the fifteen year tests. This would seem to indicate that in some cases it would be unfair to gauge a child's mentality absolutely by these tests, especially by those of one level, as Binet would seem to approve in his revised scale.[11]

[11]See article on Binet's Method for the Measurement of Intelligence. Some Results. The Journal of Experimental Pedagogy, Mar. 1911, pp. 24-31.

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Chapter Eleven

VANEY AND BINET'S TESTS OF INSTRUCTION

The rôle of the regular teacher, in the determination of backward pupils, is to point out the suspects, that is, the children who are retarded in their studies. By comparing the age of each child with the average age of the class that he is in, it is easy to see whether the child is retarded or not.

A normal child enters the first grade at six years of age, and if he proceeds at the normal rate, the second grade at seven years and so on through the grades entering the eighth grade at thirteen and completing the elementary school at about the age of fourteen years. If a child of eight years enters the first grade, he is said to be retarded by two years; if, on the other hand, a child of eight, either because of superior ability, or perhaps of undue coaching by parents, is able to enter the fifth grade, he is said to be two years in advance of his normal age.

Binet and Vaney have worked out certain graded tests in the three important school subjects, reading, arithmetic, and spelling, which are intended to enable the examiners to determine with accuracy just the degree of instruction, or school knowledge, of each child from six to twelve years of age. Says Vaney:[1] "By examinations made on hundreds of children of each age from six to thirteen years, of different social conditions, one knows that the primary school pupil

[1]See Les Classes pour Enfants arriérés, Bulletin de la Société libre pour l'Étude psychologique de l'Enfant. Feb. 1911. p. 72.

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of eight to ten years, for example, ought to be able to solve certain problems in arithmetic and not to exceed a certain number of errors in spelling in a dictation. Knowledge in reading has also been rated in degrees. Subjected in this way to these three tests of instruction, the pupil shows where he stands."

Vaney points out that there are children who, for one reason or another, do not enter school until late, or who do not attend regularly enough after they have entered to make normal progress. These facts should be taken into consideration in determining the amount of a child's school retardation. Thus, a child of eight years in the first grade, who has been absent from school since he entered at the age of six, some two hundred days, would be credited with a school retardation of only one year.

If the attendance deviates only a little from the average (8 absences in a hundred days), it is disregarded by Vaney in calculating effective schooling.

The tests of instruction to which children suspected of mental deficiency are subjected, are as follows:

Vaney's Scale of Instruction

Age of Children	Degrees of Reading	Arithmetic, Typical Problems.	Spelling Typical Sentences	No. of Faults allowed in Sentences
C.[2] preparatory (1) 6 to 7 yrs.	Subsyllabic	*Subtraction of a number of one figure from a number of two figures, less than 20.* I. Take 6 apples from 19 apples. II. Paul had 17 cents. He spent five of them. How many had he left? III. Émile had 16; he lost 3. How many does he still have?	[2]The young shepherdesses of the villages return in the dark night with their lambs which they have tended all day in the fields.	25 and more than 25 mistakes

[2] C=Class.

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Age of Children	Degree of Reading	Arithmetic, Typical Problems	Spelling Typical Sentences	No. of Faults allowed in Sentences
C. elementary (2) 1st year 7 to 8 years.	Syllabic	*Written subtraction of 2 numbers less than 100 without borrowing.* 1. A merchant had a piece of material 85 yards long. He sold 13 yards. How many yards of the material were left? 2. A cashier receives 48 cents, he pays out 6 cents. How much has he left? 3. A child has 64 marbles, his companion has 21. How many more has the first than the second?		20 to 24 mistakes
C. elementary 2d year 8 to 9 years	Hesitating	*Subtraction of 2 numbers from 1 to 1000 by "borrowing"* 1. A box of oranges contains 604. They sell 87. How many remain in the box? 2. The sum of $900 is divided between two persons. The first received $548. What is the share of the second? 3. In order to pay a debt of $725, a person made a payment of $467. How much is still due?	[3]At night by the dark roads the villagers returned from the market with the heavy baskets which they had carried away in the morning full of fruit.	12 to 19 mistakes
C. Intermediate 1st year 9 to 10 years	Fluent	*Simple Problems; one division.* 1. To make a dress 7 yards of cloth are necessary. How many dresses can one make from 89 yards of cloth? 2. The sum of $424 is divided among 8 persons. How much does each one receive? 3.[4] A person buys 6 watches for $102. What is the price of one watch?		7 to 11 mistakes

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Age of Children	Degree of Reading	Arithmetic, Typical Problems	Spelling Typical Sentences	No. of Faults allowed in Sentences
C. Intermediate 2d year 10 to 11 years.	Expressive.	*Two-step Problems: division and subtraction or subtraction and division.* 1. A merchant had in the store 343 yards of cloth. He sold 285 yards. The remainder is worth $783. What is the value of one yard? 2. A workman received $250 in the month of February which has 28 days. He saved $55. How much did he spend each day? 3.[4] In order to make 54 mattresses, it is necessary to expend $3,429. What is the price of the material used in making the mattresses if the work of each mattress cost $6.50?	[3]The diligent pupils study their lessons in the books which they have brought from the school and play when they have finished.	4 to 6 mistakes

In France it has been agreed that one should take as a measure of retardation constituting a mentally deficient child (*un arriéré*) a retardation of two years if a child is less than nine years old, and a retardation of three years if he is nine or more years old.

But age in years is not always a safe guide in determining who are mentally deficient children. A child may have been assigned to a class which does not correspond to his degree of knowledge, because of his age, or because he is a dullard. Nor are the grades of work in the school classes of the same year of the same degree of difficulty, or of excellence. In different

[3]The typical sentences are translations. Sentences graded to the mentality of American children could easily be worked out.

[4]The problems have in some instances been slightly changed, the sums expended being in U. S. money.

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sections of the same city there may be very different standards of work. School age, then, can only help in selecting those pupils who are to be tested, to determine their degree of instruction. A pupil who is three years behind the normal age for his grade and who has attended school regularly, may be suspected of being mentally defective and in need of the instruction afforded by the special class.

A pupil who is sub-syllabic in reading, who makes twenty-five or more mistakes in dictation, who solves the problems given for 6 to 7 years, ought to be assigned to the "preparatory course," corresponding to the first grade, in American Schools.

In order to be assigned to what would be a second grade, a pupil must be able to read by syllables, make from 20 to 24 mistakes in dictation, and solve the problems for 7 to 8 years.

These tests should be given to the pupils individually. When they are given to the class as a whole it is difficult to avoid communication between pupils. Then the pupil's manner of attacking the test may give the examiner valuable points. "His hesitations, the nature of his errors and his method of work in arithmetic are a reflection, full of surprises sometimes, of the instruction which has been given and of the lapses in his school attendance. If one often finds here an excuse for the pupil's lack of knowledge, one sometimes discovers here the mark of a native intelligence which has been neglected. Some sort of simplification in the operations of arithmetic for example, may disclose an aptitude that would never have been suspected from the wholly dry result of a collective test, whose working out one has not been able to follow."

Vaney emphasizes the point that the child should be treated so cordially at the examination that he

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will wholly reveal himself to the examiner, and to bring this about he must not be frightened and must be, so far as possible, placed among conditions similar to those in which he is accustomed to work. He should be encouraged with friendly words and placed at his ease by a good-natured intimacy.

Reading Test

The first test is carried out in reading. "The differentiation of the five degrees is made by the general fluency of utterance, the pauses correct or faulty, or the inflection of the voice in the course of the sentence."

Sub-Syllabic Reading

The degree *sub-syllabic* is that of the child who has not yet emerged from the method stage of reading. The child simply knows his letters and can put them together, so as to read words of one or perhaps two syllables, but he has not mastered the elements of reading sufficiently to enable him to read so that a listener can understand what he is reading, without following the book.

Syllabic Reading

In syllabic reading the pupil makes a pause after each syllable. He reads thus: "I-see-a-pret-ty-lit-tle-bird-ie." He makes some substitutions of letters and some omissions. He is confused by letters having more than one sound, as the final d after p, k, and the sibilant sounds. One can, however, understand the pupil when he reads any ordinary book.

Hesitating Reading

In hesitating reading the pupil hitches along by words or groups of words, making many more pauses

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than are necessary to give the sense, e. g., "My father-had excited-my curiosity-too keenly-to refuse-to satisy-it-later."

Fluent Reading

In fluent reading the pupil makes the pauses at the signs of punctuation, but reads along in the same tone of voice whatever the context, as if he did not understand the sense of what he is reading.

Expressive Reading

The pupil reads expressively when he shows by correct pauses, as called for by the sense of the punctuation, and by correct modulation of the voice to express different shades of meaning, that he has grasped the idea of what he is reading.

Vaney says: "The length of the selection read matters little since it is the rate taken by the reader which determines the degree. One will, however, avoid prolonging the test beyond a minute, because the young child is fatigued quickly, and mistakes accumulate as soon as one exceeds one's power of attention. Ten lines of syllabic reading are a maximum."

Test in Arithmetic

The statement of the problem is dictated. If the pupil is too unskillful in writing, and, with all the more reason if he does not know how to write, the statement is read by the examiner. In this case the figures of the statement are all that the pupil writes. A good answer obtained by mental calculation is considered as valuable as that obtained by written work.

When one of the three problems of the degree is solved without an error, the degree is passed. Two problems are dictated, however, in order to be certain that the pupil has not chosen the right numerical operation by chance. The way of solving the prob-

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lem serves only to give subsidiary information on the subject's turn of mind, or on the value of the instruction he has received.

Some children who have attended school only a little have been initiated in the family into peculiar methods of arithmetic. There are some who get at a solution by groping along unit by unit in working out the problem. A long addition is substituted for a multiplication; an allotment among eight persons is made by two or three successive distributions. Attempts are made to add 7 enough times to find out the number of times it is contained in 89. All these peculiarities of the examinations should be noted. They may be used to make a decision in cases of doubt as to the final result of the tests of instruction.

One should not judge a child's ability in arithmetic as quickly as in reading; for the latter a few minutes are enough. But problems demand a long enough time for the statement, for the finding out of the solution, and for the performing of the numerical operations. This is why it is necessary to omit from the test all that is not absolutely indispensable, e. g., the written line of reasoning. The attention of the mentally deficient child is quickly fatigued, and because of this condition, some of the answers are apt to be incorrect and even grotesque. "To demand" says Vaney, "in addition to the operation the line of reasoning in written form, is to demand too much of the child."

Spelling Test or Dictation

The spelling test consists in dictating a sentence of the scale. A single sentence is sufficient in the majority of cases. One should dictate a second if the number of errors in the first should be on the line of two ages. The children of each age are distinguished

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by the number of errors. The method of correction employed is very simple.

Two kinds of errors are considered:

1. The misspelling of the single words:

2. The misuse of words; as the use of a singular verb with a plural subject or the incorrect use of one homonym for another.

A. "The young shepherdesses of the villages return in the dark night with their lambs that they have tended all day in the fields."

In sentence A of the scale, which is translated above, there are twenty-three words which it would be possible to misspell and some eleven nouns, pronouns and verbs for which different forms might be incorrectly substituted. Of course, the mistakes in English would be fewer than in French with its great number of inflected words.

Vaney counts only one fault in spelling and one fault of usage for each word, thus there can be only two faults counted for each word.

In marking the errors, mistakes in punctuation are not counted.

"When the results of each of the three tests have been marked according to the scale, it is easy to ascertain the general retardation of the candidate for the auxiliary class. A boy of nine or ten years who is sub-syllabic in reading, fails on the oral or written subtraction of the first degree, and makes twenty-five errors in one of the sentences, has an average retardation of $\frac{3+3+3}{3}=3$ years.

Another pupil of the same age who is retarded 2 years in reading, 3 years in arithmetic and 2 years in spelling would have an average of $\frac{2+3+2}{3}=2\frac{1}{3}$ years. According to the adopted standard the former pupil alone would be considered mentally deficient, 3 years of retardation being necessary to place a subject nine

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years of age in this class, unless the psychological examination should show that it is a matter of ignorance and not of mental deficiency. The diagnosis should not rest on a deficiency in one subject alone. There are many normal children who are weak in either arithmetic or spelling. For them, there is supplementary instruction which enables them to make sufficient advancement in the regular school and also sometimes a sudden awakening of aptitudes which have remained dormant for a long time. It is not the same with the mental defective who is retarded in his general intelligence.

There is no doubt that norms of instruction for the different years of school life similar to those presented above will do much to make school instruction more efficient and more effective. Such norms must be worked out for American schools. Binet thinks that such tests will protect the child by showing the results of poor teaching and will protect the teacher against false judgments on the part of supervisory officers by furnishing an accurate means of judging whether the teaching is efficient or otherwise.

The writer has used the tests in examining children who wish to take out "work certificates." He has found them of great aid in determining whether or not a child has a sufficient amount of school knowledge to be allowed to leave school and go to work under the educational qualification of the Rhode Island compulsory attendance law.

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Chapter Twelve

WAGE EARNING AND AFTER CARE OF MENTALLY DEFECTIVE CHILDREN

Of the 35,662 children in England and Wales who needed special instruction, the special schools of England provided, in 1907, accommodations for 9,082, of whom 4,986 were in London; outside of London there were only 60 or 70 special schools in all England.

It is evident that in spite of the efforts made in some large towns, the provision of facilities for the suitable education of feeble-minded children is very inadequate. "This means either that the child drags along hopelessly in one of the ordinary schools, wasting the time and energy of the teacher and the rest of the class, or that he is given up as imbecile, and stays at home, sinking deeper and deeper into mental stagnation, and needing continual watching and care by his mother."

Lapage ventures the assertion that under present conditions, special schools may be in some degree harmful if the pupils who leave are not subject to life-long control after leaving school.

"Nothing can be more foolish," continues Lapage, "than to train and give a simple education to and then to let loose over a thousand children who, in spite of the work done by the after-care associations, are many of them certain to sink to low levels and swell the ranks of those needing relief."

Dr. Kerr, Medical Officer to the London School Board, says that many of the children who leave the

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special schools speedily become "irregular and uncontrollable." "About a third of these children," he thinks,"will be capable of materially contributing to their own livelihood after leaving school, one-third will partially contribute, but require an after-care association of some kind to look after them"; and the other third should not be allowed to mix with the rest of the community, but should be cared for in custodial institutions.

The British Royal Commission on the Care and Control of the Feeble-Minded estimated that after all the low grade cases had been excluded from the special classes, 47 per cent. of the children in such classes would never be able to earn their own living. "28 per cent. would probably earn, under control, and 22 per cent. would be possible wage earners."

The Commission then concludes "that the results of this survey confirm the general opinion that the special school system is rather an incident in the general scheme than of main importance in itself and.....not the central point of any such scheme."

Lapage[1] thinks that the evidence which has since been collected as to the wage-earning ability of the mentally defective, proves this view of the Royal Commission too hopeful. The After-Care Committee of Birmingham, England, which has done so much for the feeble-minded children of that city, reported, through Mrs. Hume Pinsent, in 1910, that of the 650 children who had left the auxiliary schools of Birmingham during the nine preceding years, only 18 per cent. were doing remunerative work, and at least 65 per cent. were not.

The Employment Bureau which had been maintained by the Committee for four years, was given up owing to the impossibility of obtaining and retaining

[1]See Feeble-Mindedness in Children of School-Age, p. 35.

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ordinary situations for any but an extremely limited number of the high grade cases.

The Central After-Care Committee of the British National Association for the Feeble-Minded is doing, through its local branches, a very valuable work in the way of gathering statistics concerning children who leave the auxiliary schools. The Constitution of the Central Committee is as follows:

CONSTITUTION OF CENTRAL AFTER-CARE COMMITTEE

1. There shall be two ordinary meetings of the Committee in each year.

(*a*) On the second Friday of May, which shall take place in London.

(*b*) At the time of the Conference, which shall take place at the end of October or in November.

2. At the meeting in May the general arrangements for the holding of the Annual Conference at the close of the year shall be settled, including the subjects for discussion and readers of papers, the Local Committee having been previously invited to send in suggestions for subjects and readers.

3. Two Delegates from each After-Care Committee shall be annually elected to the Central Body, except in the case of the Committee at whose centre the Conference is to be held, and of London, both of which shall be entitled to elect three delegates to the Central Body. The election shall take place previously to the May meeting, and be at once communicated to the Secretary.

4. If the Committee of the Centre in which the Conference is held cannot entirely meet the Conference expenses, the Central Body may be asked to assist. An estimate of the expenses of the Conference shall be furnished by the Local Committee at the previous May meeting.

5. It is desirable that a voluntary fund should be raised for Conference purposes.

6. The cost of printing programmes shall be borne locally. The drawing up and cost of printing the Report shall be undertaken by the Central Body.

7. The place of the next Conference shall be settled by the Delegates at the Annual Conference.

8. The Central Body shall supply to the Local Committee any information as to the working and arrangements of holding a Conference which the Local Committee may require.

9. The arrangements for a Reception Committee shall be undertaken by the Local Committee.

10. The Local Committee shall undertake local notices and newspaper reports, and the Central Committee notices and reports for the general press.

11. Any alteration or amendment of these rules can only be made by the Central Committee after at least four weeks' notice to that effect previously to the next ordinary meeting.

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12. Quorum for ordinary meetings shall be three.
NOTE—It is recommended:
(*a*) That Local Education Committees should be asked to purchase copies of the Conference Reports for the use of their Head Teachers in Special Schools.
(*b*) That a fly-leaf be attached to the invitation to Conferences for intending purchasers of the Report to fill in and return to the Central Body so as to ensure a certain supply of Reports being purchased.

According to the report for 1909 of the Chairman of the National Association for the Feeble-Minded, Sir William Chance, sixteen centers reported to the Central Committee statistics concerning the work of local after-care committees. An analysis of the statistics from thirteen of these centers, is given in the accompanying table.

One of the most efficient of the local after-care committees is that at Birmingham.

Through the courtesy of Hon. Albert Halstead, United States Consul at Birmingham, we are able to give a rather detailed report of the organization and work of the Birmingham Committee. This subcommittee of the Birmingham Education Committee, called the Special Schools After-Care Sub-Committee, is made up of persons who make a point of visiting mentally deficient or crippled children, in order to assist them. It has a membership of thirty-four co-opted members, including five doctors, a clergyman, the Secretary of the Education Committee, the Education Committee's Medical Superintendent, the Superintendent of Public Schools, two District Superintendents of School Attendance, and other persons, especially ladies, who are interested in mentally defective school children.

The committee aims to keep an accurate record of the careers of the children after they leave the special schools, seeking in this way to find out to what extent they become self-supporting, or partially self-

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ANALYSIS OF LOCAL AFTER-CARE RETURNS.

Center	In Workhouse.		In Asylum		In other Institutions.		Finally not considered Feeble-minded.		Regular Work.		Irregular Work.		Useful at Home.		Not useful at Home.		Imprisoned.		Police Trouble.		Criminal Action.		Married with Children.		Married with no Children.		Fallen Girls with Children.	Fallen Girls without Children.	Lost sight of or left neighbourhood.		Dead.		Private Schools.		Too ill to come to School.		Totals.		Grand Totals.
	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G		G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	
Birmingham	19	16	3	3	38	35	46	18	62	23	11	6	16	12	5	4	2	—	7	—	—	—	1	—	—	—	2	1	71	52	16	6	5	3	17	17	319	199	518
Bolton	3	3	4	2	4	4	—	—	103	30	11	4	9	20	2	5	—	—	—	—	—	—	—	—	—	—	—	—	17	12	2	7	1	4	3		159	91	250
Bradford	1	1	3	—	3	—	7	4	27	12	3	—	—	6	3	—	—	—	—	—	—	—	—	—	—	—	—	—	15	5	1	2	1	1	4	5	68	36	104
Brighton	—	—	—	—	—	—	—	—	—	—	1	—	5	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	2	8
Bristol	5	2	3	3	3	8	—	—	14	4	—	—	7	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	31	11	7	5	10	6	6	6	86	60	146
Bromley	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Leicester	5	4	4	4	1	7	4	1	9	5	5	2	2	5	10	14	3	—	1	—	—	—	—	—	1	2	—	—	3	1	2	—	—	—	—	—	50	45	88[2]
Liverpool	22	11	6	1	50	29	2	—	25	3	24	16	13	40	75	40	2	—	3	1	—	—	—	—	1	1	1	1	122	45	23	11	25	7	—	—	392	207	599
London	3	5	1	—	8	11	—	—	97	53	—	—	6	51	18	12	2	—	—	—	—	—	—	—	—	—	—	—	6	5	—	2	—	—	—	—	141	139	280
Northampton	—	1	—	1	1	—	2	2	1	—	—	—	—	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	1	6	9	15
Nottingham	2	—	—	—	4	2	2	4	9	1	—	—	1	2	1	1	—	—	—	—	—	—	—	—	—	—	—	—	3	—	2	—	—	—	3	8	27	18	45
Oldham	2	2	1	—	1	1	1	—	12	7	—	—	1	4	1	1	—	—	—	—	—	—	—	—	—	—	—	—	2	5	2	—	—	—	1	—	24	20	44
Plymouth	—	1	—	—	—	1	6	9	10	11	5	2	—	13	4	2	—	—	3	—	—	—	1	—	—	—	—	—	1	3	—	1	—	—	8	6	37	50	87
Totals	62	46	25	14	113	98	70	38	369	149	61	30	60	172	119	81	9	—	14	1	—	—	1	1	1	4	3	2	272	139	55	34	41	18	44	46	1,316	876	21,851[1]

[1] Leicester return.—It will be observed that these totals do not correspond with these constituent figures, which total 95 and 2,192 respectively. The reason is that some of the Leicester cases come under two headings, viz., five boys and two girls. As to the boys, the one who is married is also reckoned among the workers, the four "*imprisoned*" or "*in police trouble*" are included among the regular and irregular workers. Of the girls, one of the two *married* has been "lost sight of" and is also entered in that column, and the other "*married*" is also reckoned among the "*workers*."

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supporting, to find out how far they are morally responsible and how many of them have children either legitimate or illegitimate, and, finally, to help those capable, to find work although, as has been noted above, the Employment Bureau of the Committee has been discontinued.

The Committee's methods of work are interesting. Each member looks after seven or eight children, visiting them from time to time. These visitors are persons who, so far as possible, have made the acquaintance of the children while they were still in school. Five or six visitors are assigned to each special school where they make the acquaintance of the children who are soon to leave and get valuable information concerning them from their teachers.

The sub-committee holds three conferences a year. At each conference each member makes a report on a special blank concerning each child under his charge. The form asks for information concerning the child's "age, special school training, the length of time in a special school, regularity of attendance, school record; if employed, the name and address of employer, occupation and special aptitude of child, whether occupation is regular or not, the average wages, whether the child has been in an institution, workhouse or asylum; names of parents and their occupation; whether mother was at work during pregnancy; home conditions, including over-crowding, general poverty, insufficient nourishment for children, the number of children at work, at school, or at home; whether friends are willing and able to support the mentally deficient child; whether it lives at home or with friends; whether useful at home or not; whether it has been in trouble with the police; information as to character, conduct, health and marriage; character of the family; its eccentricities; whether there are

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criminal tendencies; whether the family is in constant receipt of poor-law relief, and whether the family is specially talented."

Persons who have had defectives in their employ fill out another form which shows what the defectives have been able to do towards earning a living. Another form contains data which show whether the child should be sent to an institution. Cases of especial difficulty are discussed by the members at the conferences and the information contained on the forms is preserved for future reference. In her report to the Birmingham Education Committee in June 1910, Mrs. Hume Pinsent makes the following observations:

"An investigation of the statistics previously given shows that out of 316 feeble-minded persons who have left school and are still alive and whose whereabouts are known, only 36 per cent. are earning wages at all; only 6.6 per cent. are earning as much as 10 shillings ($2.43) a week and less than 1 per cent. are earning 15 shillings ($3.64 a week).

"We have already explained that if the numbers 'lost sight of' had been included, the percentage of wage-earners would be much lower and we have proofs that the "lost sight of" belong to a class who rarely become wage-earners. The After-Care Sub-Committee, therefore, after nine years' experience with defectives, would like again to repeat their conviction that for a large percentage of the feeble-minded permanent care and control is necessary for the following reasons:

1. "To enable them to contribute towards their own support:

2. "To save them from harsh treatment at home and in the streets:

3. "To prevent their becoming drunkards, criminals and prostitutes;

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4. "To prevent their giving birth to children who must almost certainly grow up to be a burden on the community.

"As a corollary to this, we feel we ought to add that when legislation has established the continuous control recommended by the Royal Commission on the Care and Control of the Feeble-Minded, then, and then only, will the expenditure of large sums of money on special schools be justified."

To give these children an expensive training and then as soon as they reach the age of 16 to turn them out on the streets is, according to Mrs. Pinsent, a waste of time, money and energy of the community.

She further points out, that until England is willing to provide for the continuous care of the mentally defective, the money spent for special schools is largely being thrown away, for the children are allowed to go out into the community and marry and reproduce their kind in ever increasing numbers.

Dr. Anne Moore[8] in her report to the Public Education Association of New York City, under the title "The Feeble-Minded in New York," presents some very valuable and striking information. The section on Feeble-Minded Children in the Public Schools is especially pertinent to the subject of after-care. In opening this section, Dr. Moore makes some significant statements. She shows that New York makes no legal provision for the education of feeble-minded children, that the Compulsory Education Law, while in spirit it recognizes the right of every child to receive an education, curiously exempts from school attendance children who are "physically or mentally unfit," thus leaving it to parents whether they will send to school these children who need to have their

[8] The Feeble-Minded in New York, Anne Moore, Ph. D. Published by the State Charities Aid Association, New York, June 1911, 111 pages.

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small powers developed. She further shows that, although the Board of Education of New York City has established special ungraded classes for mentally defective children, and has placed the responsibility of reporting such children to the Inspector of Ungraded Classes on the school principals, yet "a year or two ago, out of 370 principals in Manhattan, the Bronx, and Richmond, 168 failed to report any children not making normal progress. This indicates either serious inability to recognize mental deficiency, or an indifference to the subject."

The lowest estimates place the number of mentally deficient school children at about 1 per cent. of the school enrollment, while Goddard's study would indicate as high as three per cent. Basing our computation on the lowest estimate, there were, in 1910, out of the 606,568 children enrolled in the elementary grades and kindergartens of the New York public schools, probably some 6,065 mentally defective children needing special class instruction.

Dr. Moore states that in 1911 there were 125 ungraded classes in New York City enrolling some 2,000 defective children. A comparison of the actual enrollment with the number that should be enrolled, brings out vividly the lack of provision in our largest American city for this class of unfortunate children.

Dr. Moore points out that the children enrolled in these classes, are greatly benefited by the training they receive, but that the training is allowed to lapse after the children leave school. If such training "were continued under proper supervision, many of these children could be made useful and happy, and at least partially self-supporting.

"A proper segregation law would remove from these classes the following hampering conditions:

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1. "Lack of power to enforce attendance upon defective children who might profit by special training.

2. "Lack of provision to continue the training of defective children after they have reached the school age limit of 16.

3. "Overcrowding of classes with cases that properly belong in custodial institutions, to the detriment of the interests of the less backward children.

4. "Unintelligent opposition."

We give in the following pages the "after-history" of some fifty persons who have been in the ungraded or auxiliary classes of the New York schools. These facts were compiled by Dr. Moore, who thinks that they indicate that "much of the benefit of the training received there (in these classes) is lost through lack of subsequent training." Twenty of these persons are of Jewish parentage, 10 of German parentage, 6 Italian, 5 Irish, 1 Swiss, and 7 are children of native-born Americans.

Out of the whole number, only two seem to be able to hold permanent positions; "5 worked steadily for a few weeks at an average wage of $3.50; 12 have worked at odd jobs for a few days at a time; a few help at home. The majority are utterly incapable."

These persons left the ungraded class:

1. "Because of the necessity of entering some institution, penal or custodial;

2. "Because, having reached the limit of school age, they could be no longer retained;

3. "Because their parents insisted upon their going to work. The small number of cases and the incompleteness of individual histories prevent sweeping conclusions, but the facts disclosed indicate:

(1.) "That such individuals are incapable of earning their living without supervision:

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(2.) "That they are a menace to the community when unrestrained;

(3.) "That they are subjected to temptations which tend to lead them into a penal institution;

(4.) "That in an educational or industrial institution, they might lead a useful and happy life.

They further indicate that, after discharge from the ungraded class, individuals should be followed up by some competent authority to the end of knowing:

1. "To what extent they received lasting benefit from their training in the public schools;

2. "What is the best method of dealing with them after they leave the school; and

3. "Where the center of infection which they represent is located."

STATISTICAL TABLE

FEEBLE-MINDED CHILDREN FORMERLY IN THE UNGRADED CLASSES OF THE PUBLIC SCHOOLS OF NEW YORK CITY

FIFTY TYPICAL CASES[4]

Case	Sex	Age	Home	Family	Characteristics
1	m	19	Poor; 10 in 4 rooms.	8 children in family; 6 abnormal.	Carrier for clothier at $5.50 a week; night school.
2	m	18		1 brother abnormal; out of employment.	Smokes; steals; lies; nothing to which he can turn his hand; peddler for a while; lost job.
3	m	17	Fair		$5.00 a week.
4	m	13	Good		Steals; very stout, once hired, for a pittance, to exhibit himself as fat boy; arrested 4 times; in reformatory since leaving school; incapable.
5	f	20	Good	1 sister, 18; fm.[5]	Incapable; at home; does nothing.

[4] Table prepared by Dr. Anne Moore.

[5] f. m.=feeble-minded.

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Case	Sex	Age	Home	Family	Characteristics
6	m	18	Fair		Bad temper, "cranks;" roving streets; employed for a short time in soap factory, lost job; arrested once, paroled.
7	m	16	Poor		Adenoids, defective speech; shuffling gait; papers made out for Syracuse; working at pasting, $2.00.
8	m	17			Hydrocephalic; pulled threads in a tailor shop for a while.
9	m				Paralytic; on streets most of the time.
10	m	16	Bad		Tb;[6] defective eyes; cleft palate; smokes; steals; roams streets; unable to care for himself; idiotic.
11	m		Poor		Idiot; burned to death because he was too stupid to walk away from the fire.
12	m	16			Easily led; can do neither mental nor physical work; transferred from Randall's Island to Syracuse, came home on vacation, overstayed time, parents will not pay for return.
13	f	17	Poor	Parents alcoholic.	Defective teeth; fond of boys; worked few weeks in factory; mother wants to place her in service.
14	f	15			Epileptic; immoral; attractive; "looking for work."
15	f	17	Poor		Housework at home for a time; ruching, six weeks, $3.50; mother would like to have her taught to work; walks the streets at night with her "lady friend."

[6] Tb=Tubercular.

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Case	Sex	Age	Home	Family	Characteristics
16	m	17			Defective eyes; no co-ordination; stubborn, incapable, disobedient; arrested many times; has worked occasionally on moving vans or at painting; is usually discharged after half a day.
17	m		Poor	Brother fm.; 9 children; shiftless.	Has sold papers; cannot hold job; loses it at once.
18	f	14	Poor		Ill in infancy; repulsive; was on Randall's Island; withdrawn because mother was lonely; easily led.
19	m	16			Partially paralyzed; was on Randall's Island; withdrawn to help father in saloon.
20	m	13	Poor; 3 in 1 room.	Mother alcoholic; on Blackwell's Island.	Club-footed; peg teeth; quarrelsome; has been in Catholic Protectory twice.
21	m	16	Poor	Mother fm.	Enlarged glands; bad teeth; has tantrums; steals; criminal tendencies; sometimes peddles.
22	f	18	Fair		Does housework at home; papers have been made out for Newark, parents object because of possible earning power; will probably injure someone in temper fit.
23	m	17		Mother fm; mother's father fm.	Incapable; run over by express wagon; sometimes runs errands or does odd jobs.
24	m	16	Fair		Scarlet fever; heart disease; rheumatism; defective vision; incapable; at home; does no work.

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Case	Sex	Age	Home	Family	Characteristics
25	f	16	Fair		Helps with housework and care of children; once worked in saloon; "expects to marry."
26	m	18			Has been arrested; never worked.
27	m	17		Father tb.	Runs errands.
28	m	13		Sister fm, married.	Low-grade idiot; self-abuse; runs streets.
29	m	11			Bad language; corrupts smaller children; violent; runs streets; incendiary tendencies.
30	m	16	Poor	Mother fm; sister deaf mute	Has been in the House of Refuge and in the Truant School.
31	m	16	Poor	Brother fm; sister backward.	Steals; runs streets; has been arrested five times.
32	m	15			Worked a few weeks, had trouble with employer; high grade, capable of work.
33	m	16			Worked two weeks in laundry.
34	f	16			Immoral: needs constant supervision; violent temper; in candy store a few weeks filling boxes; spends evenings on the streets or bridge.
35	f	17	Fair		Epileptic; at home, incapable of doing any work.
36	m	16		Family irresponsible.	Self-abuse; papers made out for Rome, family refused at last moment; engaged to be married.

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Case	Sex	Age	Home	Family	Characteristics
37	m	17		Parents dead; lives with sister.	Vagrant; imbecile.
38	f	17			Large; ill-shaped; pretty face; at home, incapable of doing any work.
39	m	18	Bad	Father tb.	Scarlet fever; odd jobs; peddling; arrested for peddling without license; in jail two days, mother paid fine.
40	m	16	Good		Defective speech; violent; at home.
41	m	18	Fair		Rickets, palsy, paralysis; large head; incapable of work, at home.
42	m	18			Arrested May, 1909, blackmail, blackhand extortion; suspended sentence.
43	m	17			Arrested July 29 for stealing transfers; sent to Catholic Protectory.
44	f		Bad	Brother fm.	At home.
45	m	12	Bad; 9 in 3 rooms	8 children; 1 crippled.	Eighth child; truant; smokes; run streets.
46	m	16	Poor	Mother fm; 5 children all fm; two sisters have illegitimate children.	Moral degenerate; smokes; cruel; vicious; delivery boy, 25 cents a day; father objected to his work; at home helping mother; various attempts made to get him committed balked by mother; called "Fire" in a moving picture show and caused panic.

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Case	Sex	Age	Home	Family	Characteristics
47	m	16		Parents alcoholic; mother dead.	Relatives support him with difficulty; for a time in a factory; for a time peddled; cannot work steadily enough to earn living.
48	f			Parents alcoholic; mother fm; 4 members of family on Randall's Island.	On Randall's Island.
49	f	17			Quiet and good; housework at home.
50	f	10		18 children in family; 4 living.	Truant; steals; now in House of Good Counsel, White Plains.

Under present conditions the managers of institutions for the feeble-minded are often powerless to hold serious cases that have been committed to their care because of a paternal request for discharge, even though experience shows that feeble-minded individuals who may improve under the discipline of an institution lose the benefits of the training they have received when they leave it, and again become dependent, or drift into crime or immorality.

After-Care in Germany and Switzerland.

"The experiences" says Böttger, "in cities far different in character, prove that in Germany from 70 to 80 per cent. of the auxiliary school pupils are capable of earning a living."[7]

[7] See Article, Berufswahl der Hilfsschuler, Handbuch des Heilpädagogik, p. 264.

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Gardening and farming are recommended as the best occupations for auxiliary school boys, but, unfortunately, the greater number of the auxiliary school pupils live in large cities and cannot, for this reason, easily enter agricultural occupations, and usually the parents are unwilling to allow them to go away from the city to enter into the unknown and unaccustomed conditions of agricultural pursuits.

In the cities, the simplest occupations open to them are those of street and of common laborer. Such work the former auxiliary pupils perform well under proper direction and oversight. They also perform well many lines of work in the textile trades, as much of this work demands only mechanical activity with little thought, a constant, uniform, punctual repetition of the same manipulations. Böttger states that many feeble-minded workers are able to do this manual work just as well as their normal fellows, and often show much zeal and perseverance.

The best occupation for girls directly after leaving the auxiliary school, is housework at home, and aid in the care of the younger children, under the supervision of the mother; also knitting, darning, mending, and sewing. They may be able to earn their board as servants or waitresses in families where a calm and patient housewife herself works with them, and can give them the necessary directions and encouragement. Only after such a preparation will they be able to fill positions as housemaids. Others earn their living as tailoresses, laundresses, or in similar positions, and others in the textile trades.

Of the 74 boys and 59 girls who left the 12 auxiliary schools of Hamburg, 14 boys secured apprentice places as gardeners, bakers, cabinet-makers, tinsmiths, masons, and barbers, 17 went into the country as servants or garden-workers, 22 became errand boys in

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Hamburg. Of the 14 apprentices only one could be provided for in Hamburg; the others went to master-workers in the smaller cities or larger villages. Of the 26 girls, 2 went to homes, 1 to a school of household science, 14 secured places as servants in the city, 6 in the country, 4 went to work in the industries; 2 are undecided as to positions.

After-Care Societies have been formed during the last fifteen years in Leipsic, Königsburg, Breslau, Frankfort-on-the-Main, Zwickau and other cities of Germany. These societies appoint a guardian for every boy and girl. This guardian acts as an adviser and helper in co-operation with the teachers, school physician, and parents, in the choice of an occupation for the child, and in seeking a reliable, intelligent master of trade or employer who will guarantee a thorough trade training. They seek to guide the conduct of their charges in a kindly manner, to prevent, by advice, frequent changes of occupation, and seek to protect them from exploitation and dangers, which, because of their weakness, threaten them in public life. By the payment of apprentices' premiums, they gain the right to concern themselves for their charges during the apprenticeship, and their advice and instructions find in the apprentice-masters willing listeners.

The societies also pay premiums to such masters as have trained mentally defective boys in their trades. In Saxony it has been the practice since 1865 for every master to receive, on his application, after the completed apprenticeship of a mentally defective boy, a premium of 150 M from the Minister of the Interior.

In Switzerland, the "Albert Fisler Fund" serves this purpose, paying premiums to masters of a trade; textile overseers and others who succeed in training for some permanent work a mentally defective apprentice after his dismissal from an institution or special class,

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to such a degree that he can earn his living, such premiums being in recognition of their proven skill and patience.

In the same commendable manner the Königsberg, Berlin, and other After-Care Societies (Fürsorgevereine) carry on their work.

One is not able to explain why more than twice as many auxiliary pupils are able to earn their living in Germany as in England. It may be due to the fact that there is more demand in the former country for the coarser kinds of labor, or it may be due to the superior patience of the German people and very likely the premiums just mentioned may be an incentive for the employers to keep the mentally deficient in their employ. We have, however, much to learn as to the best way of dealing with these unfortunate boys and girls after they have left the auxiliary schools.

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APPENDIX

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Appendix A

REGULATIONS GOVERNING THE ORGANIZATION OF AUXILIARY SCHOOLS IN BERLIN*

The auxiliary schools shall so serve the interests of the children of the community, who, on account of mental and physical defects, cannot pursue the instruction of the regular school with success, that they may either be returned to the regular schools or may obtain in the auxiliary schools a suitable preparation for later life.

The auxiliary schools are departments of the public Volksschule.

Admission to the Preliminary Class (Vorklasse)

Such children as have attended without success the lowest class of the regular school for a year, and after the work of the year must still remain in the lower division of the class, may be assigned to one of the preliminary classes for the instruction of mentally retarded children.

To the preliminary class may be assigned before the close of the year, such children as proved themselves unfitted for the work of the regular school. The direction of these classes is given to an experienced auxiliary school teacher.

The methods of instruction to be employed and the number of pupils to a class, shall be the same as for the lower grades of the auxiliary school. The number of recitation hours per week shall, as a rule, be 20.

The school board determines the time of admission. The necessity for admission to these classes will be decided upon by the teacher of the regular class in question, the school physician, the principal and the school inspector.

Those children who, after attending the preliminary class for one year, pass the examination for the second class of the regular school, or make such progress that their advancement in the regular schools seems probable, shall be promoted to these schools.

At first, only one preliminary class is to be opened in a school district.

When they have proved themselves, their increase will be considered as need is shown, but for this increase, the approval of the district board will be necessary.

*These regulations are severely criticised by auxiliary school teachers in Germany as being a compromise measure in that they hold out the false hope that auxiliary school pupils may be able to do the work of the regular schools. See Zur Neuordnung des Berliner Hilfsschulwesens, Dressler, Die Hilfsschule, May 1912, pp. 125-131.

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Admission to the Auxiliary School

The children who have attended the Vorklasse for one year with little or no advancement, are to be thoroughly examined to see whether they shall be transferred to the auxiliary school, or in case they have had a long period of sickness during their attendance in the preliminary class, a still longer trial in the same class is to be recommended. No child is to remain more than two years in the Vorklasse. Children who are undoubtedly feeble-minded may be assigned at once to the district auxiliary school. Children who are pronounced idiots, shall not be sent to the auxiliary school, but if possible shall be transferred to an idiot asylum.

In the examination of children of the Vorklasse, the teacher of this class, the principal of the district school with which the class is connected, the director of the auxiliary school, the school physician, and the school inspector are to take part.

On a day designated by the school board, the teacher of the Vorklasse shall hand to the school board through the principal of the school, a list of pupils of the Vorklasse with a short sketch of each and his recommendations in regard to promotion into the regular school, or to the auxiliary school. The decision is left to the school inspector.

Children who, on account of deafness, are retarded in the regular schools, shall be assigned directly to a special division of the auxiliary schools designed for children who have defective hearing. For an expert opinion on children with defective hearing, an ear specialist may be called in consultation.

Admission to the class for children with defective hearing shall occur, as a rule, only in April.

Organization

1. Whenever it is any way feasible, the existing supplementary classes (Nebenklassen) will be united, forming an auxiliary school of five graded classes. The fifth and the fourth classes form the lowest grade (Unterstufe), the third and second, the middle grade (Mittelstufe), and the first class, the highest grade (Oberstufe). Generally, pupils remain at least two years with the same teacher. In the lowest grade of every auxiliary school, parallel classes may be formed.

2. The supplementary classes not organized in independent auxiliary schools, consist of classes of the lower and middle grades, and from them the larger children of whom a longer school walk may be required, are transferred when ready for advancement to the nearest auxiliary school. These supplementary classes are under the charge of the principal of the district school with which they are connected.

3. The departments of the auxiliary school for pupils with defective hearing, are to be so organized, if possible, that they shall have at least three graded classes.

4. The membership of the classes of the lower grade shall be 18: of the middle grade 20; of the higher grade 22; and of the classes for children with defective hearing 12.

5. In the supplementary classes, the principle of co-education of the sexes, is to be carried out.

6. The dismissal of pupils shall be attended to by the office of the school board, not by the school commission.

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7. Children of the Vorklasse and of the auxiliary schools, who are mentally deranged or markedly epileptic, may be excluded from these schools, and may be assigned to a corresponding city institution or, by order of the school board, may receive private instruction at the expense of the city.

8. The auxiliary schools are, as a rule, carried on in the district schoolbuildings, and are independent departments of the district schools, the principals of which have the office of building supervisor.

Scope of Supplementary Class Instruction

1. The auxiliary schools give instruction in the same essential subjects as the regular schools, and have besides manual work as a required study for boys and girls.

For children afflicted with speech defects, a special course in articulation is arranged.

2. For instruction in the supplementary classes, an outline of a course of study is taken as a basis, which aims for a unity of structure in the most important subjects for the general supplementary class system. By this outline, the teaching corps is granted so much freedom that wide latitude in the development of method is in no way restricted. Practical experiences gathered from the teachers will later serve to give to the outline the more permanent form of a course of study. Until then, the now current division of studies remains in force.

The classes for deaf children carry out their instruction in the regular subjects according to a special outline of studies.

3. The promotion of the children in the supplementary classes occurs at Easter. Promotion is made if the pupil has attained the aim laid down for the class in German. In number and manual work the children are grouped in special classes, according to their ability.

The Teaching Corps

As fit candidates for the office of auxiliary school teachers, only such persons are to be considered as have shown themselves capable in the work of the regular schools, have attended a training course for auxiliary school teachers, have developed skill in the line of manual work, and, finally, have shown evidence of a personal inclination toward psychological studies and social work.

1. For the direction of the classes for children with defective hearing, those teachers are favored who have passed the examination required for teachers of the deaf and dumb.

2. The teachers for the auxiliary schools are chosen by the school board from the regularly appointed district teachers, on the recommendation of the school inspectors.

3. The teachers of the auxiliary schools, of the schools for deaf children, and of the Vorklassen have, along with the instruction and training of their pupils, to consider the special care of the children a duty pertaining to their office.

4. The teachers receive the legal salary as district teachers, and are obliged, in case of need, in addition to instruction in the supplementary classes, to give a sufficient amount of instruction in the regular classes, to bring their whole number of hours of service up to that required of the regular teachers. While engaged in the work of the regular

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schools, they are under the direction of the principals of such schools. These teachers receive an annual personal remuneration of 300 M. After a five year probationary period in the auxiliary school, this is changed to an official remuneration of the same amount, which entitles the holder to a pension. The school board reserves the right to transfer auxiliary teachers to the regular schools with withdrawal of the additional salary.

In case the teachers during the five years of probationary service have to give up their teaching and be replaced, their pay ceases from the first of the month following the time of their withdrawal until their return.

The Director of the Auxiliary School

The directors of auxiliary schools are appointed by the city council from a list of auxiliary school teachers selected by a conference of school inspectors, and recommended by the school board.

The conditions for appointment are that the teachers have at least five years of successful experience in auxiliary school work and have made efforts to continue their education as auxiliary school teachers; that they further have thoroughly mastered the subject of manual work, and possess the necessary qualifications for a school director.

They bear the title of chief teacher, and must have the approval of the royal provincial board of instruction. The director of an auxiliary school exercises over the classes and teaching force placed under his charge the authority of a principal of a regular district school. He gives weekly 16 hours of instruction, of which 12 hours must be in the class directed by him. He must also regard as his special duty the care of the children assigned to the auxiliary school placed under his charge.

He must give his attention to careful keeping of the personal record sheets of the auxiliary school pupils, and take care that at the end of each half-year copies of the personal record-sheets and certificates of the pupils about to leave, are sent to the Identification Commission, and that the director of the Continuation School for mentally defective pupils receives at the same time a full statement concerning all the boys and girls who are leaving. He has to carefully preserve the records of the children for a period of ten years.

He receives in addition to the legal salary of the district teacher, an official remuneration of 600 M. per year.

Transfers from the Auxiliary to the Regular School

One month before the close of the winter semester, the director of the auxiliary schools must report to the school inspector, whether there are any children who may very probably do the work of the regular school.

The director of the auxiliary school and the principal of the district school in the rooms of which the auxiliary school is carried on, will test the children recommended and report their findings to the school inspector, for his decision. In this decision the findings of the school physician recorded on the personal record sheet are to be considered; in case of need, this official is again consulted before the decision is made. In making this decision, according to the official decree of April 6, 1901, it is to be taken into consideration that when it is a ques-

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tion of a promotion to the lower grades of the regular school, such promotion is not to be recommended in the case of children who are already over-age. If, therefore, in an individual case, it is not possible to transfer the over-age child to the middle grades of the regular school, then the transfer is to be given up, if under the circumstances there is no probability that the child would succeed in completing the middle grades before the expiration of the compulsory age limit. Very carefully to be considered is the return of those children to the regular school who have successfully finished the work of the highest class of the five grade auxiliary school, and still have at their disposal one school year, or who would like to attend school in accordance with the wish of the parents after the expiration of the compulsory limit. The plan for examining these children is the same as that used in examining the children of the regular schools who are recommended for promotion to higher classes.

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Appendix B

PROGRAMS OF WORK IN SPECIAL CLASSES

SPECIAL SCHOOL NO. 2. PHILADELPHIA.

PROGRAM. FIRST AND SECOND YEARS.

Disciplinary Class

A. M.	
9.00– 9.15.	Opening Exercises.
9.15–10.00.	Sloyd and Handwork.
10.00–10.15.	Number Teaching Period or Table Drill.
10.15–10.30.	Arithmetic [Practical Work].
10.30–10.45.	Study and recite Spelling.
10.45–11.00.	RECESS.
11.00–11.15.	Write Spelling and Dictation.
11.15–11.27.	Music.
11.27–11.42.	Second Year, Reading. First Year, Busy Work.
11.42–11.57.	Penmanship.
P. M.	
11.57–12.17.	Drawing, three days. Word Drill, two days.
12.17–12.30.	Copy Home Work and Correct Spelling.
12.30– 1.05.	LUNCH.
1.05– 1.25.	Language.
1.25– 1.40.	First Year, Reading. Second Year, Busy Work.
1.40– 1.55.	Physical Exercises.
1.55– 2.00.	DISMISSAL.

SPECIAL SCHOOL NO. 2. PHILADELPHIA.

PROGRAM. THIRD YEAR.

Disciplinary Class

A. M.	
9.00– 9.15.	Opening Exercises.
9.15– 9.25.	Dictated Spelling and Dictation. Written Rapid Work.
9.25– 9.50.	Written Arithmetic.
9.50–10.02.	Music.
10.02–10.15.	Teach new Spelling Words. Sounds. New Reading Words.
10.15–10.45.	Language.
10.45–11.00.	RECESS.
11.00–11.45.	12 boys, Sloyd. Remaining boys do Chair Caning, Raffia Work, Basket Making, Hammocks.

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11.45–12.00. Study Reading Lesson so as to reproduce story or facts at the beginning of Reading Lesson in the afternoon.

P. M.

12.00–12.15. Physical Training. Sense Training.
12.15–12.30. Penmanship.
12.30–12.35. Copy Lessons.
12.35– 1.05. LUNCH.
1.05– 1.25. Reading.
1.25– 1.45. Geography, two days. Drawing, three days.
1.45– 1.55. Teach new Arithmetic.
1.55– 2.00. DISMISSAL.

SPECIAL SCHOOL NO. 2. PHILADELPHIA.

PROGRAM. THIRD YEAR. FOURTH YEAR. FIFTH YEAR.

Disciplinary Class

A. M.

9.00– 9.15. Opening Exercises.
9.15– 9.25. Dictated Spelling. (Dictate to 3 classes at one time.)
9.25– 9.30. Rapid Work. All Classes.
9.30– 9.55. Written Arithmetic. Monday teach new work to 3rd year. Tuesday teach new work to 4th year. Wednesday teach new work to 5th year, etc. During this period mark Spelling papers, Home Work books, and return. As boys finish, mark Arithmetic papers and return. If time, have work corrected.
9.55–10.10. Physical Exercises.
10.10–10.30. Geography. Monday, Wednesday, Friday. Drawing. Tuesday, Thursday.
10.30–10.40. Penmanship.
10.40–10.45. Examine Corrected Work.
10.45–11.00. RECESS.
11.00–11.30. Language. Monday, Reproduction or Picture Story. Tuesday, Correct Expression. Wednesday, Study of a Poem. Thursday, Nature Work. Friday, Current Events, Reviews, Biographies.

P. M.

11.30–12.30. Sloyd and Handwork. 12 boys, Sloyd. Remaining boys have Raffia Work, Basketry, Hammock Making, etc., in classroom. Individual training in regular lessons during this period given to those boys needing it.
12.30–12.35. Speech Training.
12.35– 1.05. LUNCH.
1.05– 1.15. Copy Home Work. New Lessons.
1.15– 1.27. Music.
1.27– 1.47. Reading.
1.47– 2.00. Physiology or History.
2.00. DISMISSAL.

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SPECIAL SCHOOL NO. 2. PHILADELPHIA.

PROGRAM. THIRD YEAR. FOURTH YEAR.

Backward Class

A. M.	
9.00– 9.15.	Opening Exercises.
9.15– 9.30.	Written Arithmetic. Oral Arithmetic.
9.30– 9.45.	Oral Arithmetic. Written Arithmetic.
9.45–10.00.	Physical Exercises.
10.00–10.25.	Oral and Written Language.
10.25–10.40.	RECESS. (During this recess dictated spelling to boy not able to do 3rd year spelling.)
10.40–10.50.	Spelling and Dictation.
10.40–11.10.	Reading. Other boys correct Arithmetic papers or Busy Work.
11.10–11.30.	Correct Arithmetic or Busy Work. Reading. (Four boys go to Sloyd Room 11.15 to 11.45.)
11.30–11.55.	Drawing, three days. Geography, two days.
11.55–12.00.	Sense Training.
12.00–12.30.	RECESS. (SUPERINTEND LUNCHES.)
P. M.	
12.30–12.40.	Penmanship.
12.40–12.52.	Music.
12.52– 1.05.	Copy and Recite Home Work.
1.05– 1.45.	Four boys go to Sloyd Room. Remaining boys have Raffia Work, Reed Work, Chair Caning, etc. During this period hear two 6th year boys recite History, two days, Geography, two days, Physiology, one day; also, Grammar and Spelling of boy who cannot write.
1.45– 2.00.	Speech Work.
2.00	DISMISSAL.

SPECIAL SCHOOL NO. 2. PHILADELPHIA.

PROGRAM. SECOND YEAR. THIRD YEAR. FOURTH YEAR.

Backward Class

A. M.	
9.00– 9.15.	Opening Exercises.
9.15– 9.25.	Dictated Spelling. All classes.
9.25– 9.35.	Copy Home Work. Teach spelling for next day.
9.35– 9.45.	Mental Arithmetic. All Classes.
9.45–10.13.	Written Arithmetic. All Classes. During this period boys needing individual work in Arithmetic are helped. Any remaining time is spent in marking Home Work, Spelling, and as the boys finish working examples, their papers are marked and any errors are corrected by them.
10.13 –10.25.	Music. All Classes.
10.25–10.40.	RECESS.
10.40–10.55.	Fourth Year Reading.
10.55–11.10.	Third Year Reading. (Four boys go to Sloyd Room from 11.25 to 11.45.)

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11.10–11.25.	Fourth Year Geography.
11.25–11.40.	Penmanship.
11.40–12.00.	Physical Exercises.
P. M.	
12.00–12.10.	Boys Eat Lunch in Room.
12.10–12.30.	Recess.
12.30–12.45.	Drawing. Monday, Wednesday, Friday. Third Year Geography. Tuesday, Thursday.
12.45– 1.05.	Language.
1.05– 1.45.	Four boys go to Sloyd room. Remaining boys have Basketry, Raffia, Hammock Making, etc., in classroom. 15 minutes given to Second Year Reading. After this, individual work in sense training, or in regular grade work is given.
1.45–2.00.	Speech Training.
2.00	Dismissal.

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Appendix C

TEACHER'S REPORT OF A BACKWARD BOY

A REMARKABLE CASE

G——.

ADDRESS:—
FATHER'S NAME:—C———
OCCUPATION:—Paperhanger.
DATE OF ENTRANCE:—Sept., 1908. AGE:—9 years.
TRANSFERRED FROM:—Arnold School.
CAUSE OF TRANSFER:—Backwardness.
BODY:—Undersize in height, but is well nourished.
HEAD:—Circumference:—19 inches.
Overhead to ears:—11 inches.
FACE:—Good healthy color, dark eyes and hair, oddly shaped mouth.
EARS:—Normal hearing.
NASAL PHARYNX:—Enlarged tonsils. Adenoids. Has had two operations for adenoids.
EYES:—Very nearsighted. Wears glasses. Can see very little without them.
FIXATION:—Poor.
VISUALIZATION:—Good.
EXPRESSION:—Very dull and apathetic at first, but before many weeks was noticeably brighter.
HANDS:—There was a great lack of muscular co-ordination. He could do very little handwork at first, but is now making an Indian basket and has made several Sloyd models.
NERVE SIGNS:—Had chorea. There is still a little nervous twitching of the face at times.
PHYSICAL HEALTH AND NUTRITION:—He had a normal birth, but when two months old had marasmus. For two years he required constant care and nursing. He was scrofulous. The family physician says that there is a strong tubercular tendency. When quite young he had convulsions and would scream until exhausted. An aunt was subject to convulsions similar to these and died in one of them.

As he grew older he grew stronger, but he has always been delicate. Has had frequent attacks of acute bronchitis, also tonsilitis. The tonsils were very much enlarged and there were adenoids. Tonsils were removed and there have been two operations for adenoids, and it seems as though a third operation will be necessary.

He had measles several years ago, which caused serious eye trouble. He is so near-sighted that he "cannot see to put on or take off" his shoes without his glasses.

He had almost a double row of teeth, which were very irregular and decayed quickly. This caused indigestion. He has been in

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the care of a dentist for about two years, who has removed some teeth and is straightening others.

This last year (1908-1909) his health has been better than ever before, but he has had frequent severe colds in his head.

The mother said that their physician told her that G—— was feeble-minded, and at times, even yet, she notices that he has "moody spells," and while in one of them shows a strange dislike for his father, who is always kind and good to him. At other times he seems to care for his father, and at school frequently says, "My father says" etc. He has shown no signs of these spells in school, but when he has a cold or is not feeling well, he is more than ordinarily dull.

SCHOOL REPORT:—Entered Special No. 2., Sept. 1908, from the Arnold School, at the age of 9 years. He started to school at 6 years of age and had never been promoted from the First Grade.

During the summer of 1908, he was taken to Dr. Witmer's School for Backward Children at the University of Pennsylvania. Dr. Witmer examined him and pronounced him an "idio-imbecile," and told the mother that the boy was feeble-minded.

At this time he would sit in the class with open mouth and a vacant expression on his face, taking no interest in anything. He frequently had violent crying spells.

At Dr. Witmer's advice, the adenoids and tonsils were removed, eyes examined and fitted with glasses, and he was placed under the care of a dentist. He was also put on a diet. This caused him to lose several weeks of the class instruction in Dr. Witmer's school, which at that time was in the care of our Principal, Miss Calwell. On his return to school from the hospital a decided change was seen. He took more interest in things, and when the school closed, he had learned a few words and a few of the combinations of numbers to *ten*.

There was a great lack of muscular co-ordination which was plainly shown in all the handwork, but more especially in the Sloyd work.

At the close of the summer school, Dr. Witmer said that he had come to the conclusion that G—— was *not* feeble-minded, but was backward from physical defects, and was a case for a Special School, where, under proper care and training, he ought to be able to do school work.

He was sent to Special No. 2. the following September, and has required a great deal of individual care and training.

MARCH, 1909:—G—— is interested in everything in the school. The ordinary things about which a child of 5 or 6 years of age usually asks numerous questions, he has been noticing the last few months, and they have been the subjects of many questions from him. The beginning of the term he would sit idly waiting to be told to do his work, but now he is always busy.

In arithmetic he has learned *all* the combinations from 1 to 10, and is now working on those from 10 to 20, and can read and write to 100 with few mistakes—makes and works small number "stories" in addition and subtraction.

Visualization in reading is good. The sight words he learns easily and remembers them very well. He is good at "sounding"

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the new words too, which, no doubt, is due to his daily drill in speech training. There is a little peculiarity in the way he "sounds' a word the first time, as, for example, in the word *scour*—Instead of sounding the *sc* and then *our*, he will say, "*our*, *cour*, *scour*." At first I would insist on his "sounding" it the proper or usual way, but he would become confused and had great difficulty in getting the correct pronunciation. So I have allowed him to use his own method, which rarely fails him.

The speech training also helps him in spelling, but he can only learn from *three* to *five* words a day and *no more*.

Penmanship is poor but plain, and he has a fair amount of speed.

In language, he could not remember a story to reproduce it orally at first, but now he not only tells it well, but also does fairly well at writing it. This he is not required to do, but he asked to do it for "busy" work.

In five months he learned 148 words, which he knew by sight, could spell, and use in sentences and in making little number stories.

The speech defect, which was very decided, is gradually disappearing under the course in speech training. The daily drill on sounds and in articulation, and also the straightening of the teeth, have been very beneficial.

In the manual work there is improvement also. He has made several models in Sloyd, and has an Indian basket nearly completed, which is decidedly the best handwork that he has ever done.

FEB., 1910:—At the February promotions G—— was promoted to regular high 2nd year work, remaining under the same teacher. In all the work, he is doing well. He was under the care of a substitute teacher for several months, who, necessarily, could not carry on the work with him as planned by the regular teacher, so he probably did not make the usual progress for that time. He is very anxious to get along in his work and was so pleased with his promotion that he wanted to learn long division with the 3rd year class. As he knew most of the multiplication tables, and was able to take up the extra work, I taught him along with the other boys and now he is able to work examples with two figures in the divisor and not *more* than three figures in the quotient. He had very little difficulty in learning this, which sometimes is rather difficult for normal children.

APRIL, 1910:—G—— has worked along with the other boys in regular class work for several months. He has very little individual attention any more and gets along well in all his work. For some time now he has had ten words in his daily spelling lesson and soon will be able to take fifteen.

The Principal was discussing the advisability of sending him back to the regular school in September, 1910.

There is much reason to believe that in the coming years of his school life, if his health permits, he will be able to recover much of the time lost by the retardation of development caused by physical defects.

By the removal of these physical obstructions at the age of 9 years, his intelligence was awakened, and, at 9 years he had to begin the school work of a child of 6 years of age. In the last two years G—— has done the work of a child from 6 to 9 years, but

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while in school work he is several years behind his grade, yet his general intelligence is nearly that of a normal boy of his age. At present, his condition seems to be that of a normal child, and he ought to be able to make the same rate of progress as is expected from the average normal boy.

GENERAL REMARKS:—G——'s father is a graduate of Girard College. Both parents are much interested in the boy's welfare and have made great sacrifices to give him proper care and attention and to secure medical treatment for him. G—— is the eldest of three children. His sister also has adenoids, but G—— is the only abnormal child.

The parents were very much grieved over their boy's condition and had done all they could to help him but to no avail. In the spring of 1908, the mother, at a "mother's meeting" at the Glenwood school, heard Dr. Witmer of the University of Pennsylvania deliver a lecture in which he spoke of the care that backward children should receive. She immediately had the father take G—— to Dr. Witmer, with the results mentioned above.

The parents are delighted with the progress he has made and fully appreciate the efforts put forth in his behalf.

When he first come to our school he did not take much notice of anything, but gradually things would attract his attention, and he never tired of asking questions and making remarks about them, some of which were very original.

G—— is gentle and quiet in manner and gets along well with the other boys. He is obedient and has strong affections.

This has been a most interesting case, as an opportunity has been given to watch the awakening and development of a mind that was almost a blank.

JESSIE G. MYERS, Teacher.

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Appendix D

AN INTERESTING CASE OF MOTOR DEVELOPMENT

Roy ———.

ADDRESS:—

FATHER'S NAME:—John.

OCCUPATION:—Clergyman.

DATE OF ENTRANCE:—December 1908. Age:—16 years.

BODY:—Nearly normal development of trunk and upper limbs. The lower limbs are normal from hip to knee, but below the knee they are undersize and not well developed, probably from disuse.

FACE:—Features well proportioned and general expression fairly intelligent.

EARS:—Normal.

EYES:—Normal.

NASAL PHARYNX:—Adenoids. Probably slight paralysis of upper part of throat.

PHYSICAL HEALTH AND NUTRITION:—A case of congenital paralysis, but the parents being unused to children, (this being their first child) did not realize at first that anything was wrong. As he grew older they gradually noticed that he was not like other children, and finally found that he could not walk. A number of physicians were consulted and they pronounced it a case of "spastic paralysis" with no hope of recovery.

A nurse was secured for him who gave him different kinds of treatments, and devoted much of her time to trying to teach him to walk. One time, she succeeded in having him walk across the room *once*, but this never happened again.

He *can* stand upright, but seems unable to balance himself and is very nervous, fearing that he will fall. He has learned to walk on his knees and can get around quite well, even being able to go up and down stairs by himself.

His general health is good, and his body is well nourished.

It seems that the motor area is the only part of the brain that is affected, as he seems to be of nearly normal mentality for a boy of his age.

SCHOOL REPORT:—Not being able to walk, Roy was not sent to any school, but tutors were employed to educate him at home. As he grew older, he craved the companionship of other boys so his father sent him to a boarding school.

Children in this condition, physically, are usually more or less feeble-minded, and such was the case in this boarding school. As Roy's mentality is nearly normal, under those conditions, his boarding school life proved a failure.

In the autumn of 1908, Dr. H——— was lecturing in Philadelphia, at this time they lived in C———, Mass. While here he visited Temple University to see if it would be a suitable school for Roy. Dean McKinley of the University would not take him but sent Dr. H——— to see the Principal of Special School No. 2. Dr. H——— was favorably impressed with the school and in December.

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1908, brought his family to Philadelphia and located near the school where Roy was sent at once.

In all oral work, Roy was well advanced. He could spell well, had studied history and geography, was fond of reading, but on account of a speech defect, caused probably by some paralysis of the throat, had great difficulty in reading aloud. He could not write at all, not being able to use his hands. Immediately, upon entering school, exercises to strengthen the muscles of his legs were given him and he was urged to walk up the room between the forms, supporting himself by the desks. This was very great exertion, but this practice is kept up daily.

He had never been able to use a pen or pencil at all, indeed it seemed almost impossible to bring about the proper co-ordination of muscles necessary to bring the pencil to the paper. Heavy manila paper and a thick heavy pencil were given to him and, after repeated effort, he succeeded in learning to make all the figures—then he began the letters, singly at first, and then in words.

Every day he is given about an hour's work in the Sloyd room. The Sloyd teacher has taken great interest in him, with remarkable results. At first he worked standing on his knees, then sitting on a stool, but finally he came to use an iron frame-work which held him upright on his feet, supporting him around the waist. He is strapped to this but has free use of his arms in an almost natural standing position at the work bench. He first learned to use the plane, then to bore holes, hammer nails and to use a saw. The Sloyd teacher also put up a heavy rope from one end of the room to the other and had Roy walk the length of the room. The rope hung very loosely, so that while it would save him from falling, yet he would have to depend upon his own efforts to some extent to keep his balance. Finally he could walk several yards without any support.

MAY 1, 1909:—Roy now can write words and has written a few short sentences, and works his Arithmetic lesson on paper every day.

He had the adenoids removed a few weeks ago. He reads aloud with much less difficulty. This, no doubt, is due to the daily drill in articulation and regular speech training.

He is very anxious to improve and in school willingly and cheerfully does all that is required of him, but his father says that at home he will not practise writing or walking unless urged to do so. His father seems to think he lacks will power and is decidedly weak in that respect, but I do not think his school work shows that. He certainly must have considerable will power to do the things he does.

MAY 4, 1909:—Roy came to school to-day and very joyfully told us that he had walked across his room six times. He tried to show that he could do it again at school but while he failed to walk quite that distance, yet he proved that he *could* walk alone.

Development of the muscles of the lower part of the leg by suitable exercises, and confidence in his own power will, in time, probably enable him to walk enough to get around the house and will make him less dependent on others.

He is still very much pleased with the Sloyd work, and has made ten articles, among which are a boat, a small wheel-barrow and a tabouret.

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JUNE, 1909:—Left for summer home in New Hampshire.

SEPT. 22, 1909:—Received card stating that Roy would return to school in October.

OCT. 8, 1909:—Returned to Special No. 2. to-day. Noticeable improvement in speech. His regular work has not suffered from the vacation from school.

NOV., 1910:—Marked improvement in all work. Is doing regular 6th year history and geography.

APRIL, 1910:—Improvement continues. Has written a grammar lesson. Has regular 6th year grammar. Is very much interested in his history in the study of the Civil War. Studies lesson from large history at home. Has never been able to make any hand-work articles, except the Sloyd, until this week. He has just completed a 6-inch reed mat.

He says that every day he walks from one end of the second floor to the other.

Has had five boils lately. Just lost three days from school on account of one which was on the right leg above the knee. This has caused him to lose some of the exercise in walking.

Works arithmetic lessons on paper every day, also has some written work in language, or some other written lesson daily.

GENERAL REMARKS:—Roy's father is a Congregational minister from New England. He has quite a bright, interesting family of four children, of which Roy is the only abnormal one. Nothing has been spared to make Roy's condition better.

He has an attendant who brings him to school in a rolling chair. I think, perhaps, it would be better for Roy not to have so much attention, as he would then be compelled to use his arms and hands more, and do more for himself.

He seems to be of a cheerful disposition, but he has told me that he often gets discouraged and wonders why he could not be as other boys.

He seems to fear, too, that people will think that he is feeble-minded.

He wears wooden-soled shoes with long leather leggings, heavily padded, which are a hindrance to him when he walks on his feet, but which are a protection when he walks on his knees.

I think he should not wear them at all, and not be allowed to walk at all except on his feet.

He is just a little lazy and inclined to give up too soon, but is trying to overcome this.

He has enjoyed being in school with other boys, and is always delighted when he can enter a *class* and does not require individual work. He is very much afraid of taking the "lion's share" of the teacher's time. He is exceedingly polite and well bred, and is kind and thoughtful.

When he first came to our school one of the boys had to "feed" him at lunch time. Now he can "feed" himself, but "makes crumbs" as he says, but he is so glad that he can brush them up himself. This he always will do and will not allow anyone to do it for him.

This has been one of the most interesting cases that we have had.

JESSIE G. MYERS, Teacher.

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Appendix E

PHILADELPHIA PUBLIC SCHOOLS
BACKWARD CHILDREN INVESTIGATION
RECORD BLANK

NAME.....
SCHOOL.....
DIST. NO..... GRADE.....
DATE of BIRTH.....EXAMINED.....
MENTAL DEVELOPMENT YRS.....

III

1 Nose, eyes, mouth.
2 It rains. I am hungry.
3 Repeat 7, 2.
4 Picture (enumerates).
5 Name.

IV

1 Boy or Girl.
2 Key, knife, penny.
3 Repeat 7, 4, 8.
4 Lines.

V

1 3 and 12 grams. 6 and 15 grams.
2 Square. (Draw on back of blank.)
3 Patience.
4 Counting four pennies.

VI

1 R. Hand. L. Ear.
2 We get up in the morning; after breakfast we work; at night we go to bed.
3 Prettier? 1 & 2. 4 & 3. 5 & 6.
4 Fork Horse.
Table Mama.
Chair
5 Key on chair: shut door: bring box.
6 How old?
7 Morning or afternoon?

VII

1 Lacks eyes, nose, mouth, arms.
2 Fingers R. Hand? L. Hand? Both?
3 Write from copy. (On back of blank.)
4 Copy diamond. (On back of blank.)
5 Repeat 4, 7, 3, 9, 5.
6 Describes picture.
7 Counts 13 pennies.
8 Penny, nickel, dime, quarter.

VIII

1 Memories. Time of reading.
2 Counting stamps. 111222.

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3 Red, blue, green, yellow. Time.
4 20-1. Time.
5 Dictation. (Write on back of blank.)
6 Butterfly Wood Paper
Fly Glass Cloth

IX

1 Date.
2 Days M. T. W. T. F. S. S. Time.
3 25c.—9c.
4 Definitions. (See VI 4.)
5 6 memories. (VIII 1.)
6 Arrange weights. 1. 2. 3. Time

X

1 Month J. F. M. A. M. J. J. A. S. O. N. D. Time.
2 Money 1, 5, 10, 25, 50, 1, 2, 5, 10.
3 Sentence, Phila., Money, River.
4 1. 1
2. 2
3 3
4
5

XI

1 a. Unfortunate painter. d. R. R. accident.
b. Three brothers. e. Suicide.
c. Locked in the quiet.
Time.
2 Sentence Phila., Money, River. (X. 3.)
3 60 words in three minutes. (over.)
4 Charity, Justice, Goodness.
5 a. We started at a good hour for the park.
b. I have asked my teacher to correct my exercise.
c. A good dog defends his master courageously.

XII

1 Repeat 2 9 6 4 3 7 5. 9 2 8 5 1 6 4. 1 6 9 5 8 4 7.
2 Rhymes, day, spring, mill.
3 Repeat. "Children, it is necessary to work very hard for a living. You must go every morning to your school."
"The other day I saw in the street, a pretty, young dog. Little Maurice has got spots on his new apron!"
"Ernest is praised very often for his good conduct." "I bought at the store a beautiful doll for my little sister."
"There occurred on that night a frightful tempest with lightning. My comrade has taken cold. He has fever and coughs very much."
4 Problems: (a) Frightened at night.
(b) Neighbor's visitors.

XIII

1 Cutting paper. (Draw on back of blank.)
2 Reversed triangle. (Draw on back of blank.)
3 Pleasure and honor. Poverty and misery.
Evolution and revolution. Pride and pretension.
Event and advent.

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Appendix F

TESTS USED IN PHILADELPHIA INVESTIGATION

"A" Test.—Pupil is to cross out all the A's.

GAAQYEMPAZNTIBXGAIMRUSAWZAZWXAMXBDXAJZ
ECNABAHGDVSVFTCLAYKUKCWAFRWHTQYAFAAAOH
UOLJCCAKSZAUAFERFAWAFZAWXBAAAVHAMBATAD
KVSTVNAPLILAOXYSJUOVYIVPAAPSDNLKRQAAOJLE
AKNAAPLPAAAHYOAEKLNVFARJAEHNPWIBAYAQRK
UPDSHAAQGGHTAMZAQGMTPNURQNXIJEOWYCREJD
TXWAMQEAKHAOPXZWCAIRBRZNSOQAQLMDGUSGB
FUOFAAKYFGTMBLYZIJAAVAUAACXDTVDACJSIUFMO
SNZMWAAAWHACAXHXQAXTDPUTYGSKGRKVLGKIM
JACINEVBGAOFHARPVEJCTQZAPJLEIQWNAHRBUIAS
YRQAQEAXJUDFOIMWZSAUCGVAOABMAYDYAAZJDAL
OYKFIUDBHTAGDAACDIXAMRPAGQZTAACVAOWLYX
WABBTHJJANEEFAAMEAACBSVSKALLPHANRNPKAZF

Recognition of Words

3*	4*	5*
is	bird	could
man	vest	country
see	give	field
you	read	butterfly
boy	dear	milkman
girl	letter	become
the	want	around
big	love	scold
ball	home	leave
like	her	yellow

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WORD TESTS.

6*

MEMORY OF RELATED WORDS.

A	B
School	Kitchen
teacher	stove
book	fire
desk	wood
pen	coal
read	hot
write	kettle
add	boil
spell	water
word	tea

9*

MEMORY OF UNRELATED WORDS.

A	B
Book	Long
tree	run
door	dress
pillow	knife
letter	friend
button	break
nose	green
glass	arm
fish	toy
plant	room

ASSOCIATED IDEAS.

7*

Tell something that is	
high	empty
soft	narrow
cold	loose
new	bitter
smooth	level
red	heavy
round	woolen
clean	bright
bent	wet
deep	good

8*

Tell something that is the opposite of	
high	
light	
noisy	
hard	
kind	
old	
small	
plain	
cross	
stout	

*See Personal Record Sheet for other tests, p. 166.

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PERSONAL RECORD SHEET

Child's Name _____ Family _____ Given _____ Date _____

_____ School, Dist. No. _____ Birth { Date _____ Place _____ Order _____ } { White / Colored } Understands { Yes / No } English

_____ Principal

Parent's Name	Occupation	Residence	Birth Place	{ Educated / Can Read and Write / Illiterate }

Family History

Medical: Feeble-mindedness. Insanity. Nervous Disorder. Alcoholism. Tuberculosis. Sickness or accident to mother before birth of child.

Social: FINANCIAL { Well-to-do / Moderate / Poor } HOUSING { Entire House, No. of Rooms _____ / Apartment, " " _____ / Tenement, " " _____ } HOME TREATMENT { Good Care / Neglect / Brutality }

NO. OF		BROS.	SISTERS
Normal	{ Living / Dead }		
F. M.	{ Living / Dead }		

Personal History

Medical: INJURY TO HEAD { At Birth / After Birth } ACUTE ILLNESS { Scarlet Fever / Diphtheria / Meningitis } Convulsions, Early Malnutrition _____

Social: Bad Companions Truant Lies Steals Profane Smokes Cigarettes Vicious Habits

School History

Personal Characteristics: Good Common Sense, Dependable, Willing and Tries, Good Attention, Good Memory, Good-Natured, Affectionate, Apathetic, Restless, Mischievous, Quarrelsome, Obstinate, Incorrigible, Cheats, Marked Peculiar Traits

Schools Attended: City, Country or Institution. (Specify) _____

Standing: Age Grade Mos. in Present Grade Mos. in Preceding Grade Prospects of Promotion { Good / Fair / Poor / None }

Attendance { Regular / Irregular / Punctual } Studies—ARITHMETIC { Good / Fair / Poor } WRITING { Good / Fair / Poor } SPELLING { Good / Fair / Poor } READING { Good / Fair / Poor } LANGUAGE { Good / Fair / Poor } DRAWING { Good / Fair / Poor }

PHYSICAL CONDITION

	EYES				EARS	NOSE	THROAT	SKIN, ORTH. NERVOUS	TEETH	NUTRITION	MISC.	SIZE FOR AGE
	V.R.	V.L.	H.F. R.L.SQ.	GLASSES DATE.CH'D								
Medical Inspector's Record												
Present Examination												Large / Normal / Small
Date Notified _____												
Result _____												

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NERVO-MUSCULAR DEVELOPMENT

SPEECH. Clear, inarticulate, fluent, hesitating, silent, intelligent, unintelligent. MANUAL DEXTERITY: (Co-ordination), Form board— Touching points— "A" TEST— FACIAL EXPRESSION. Intelligent, stupid, happy, sullen, animated, apathetic, stolid, nervous, interested, indifferent, silly, dogged, helpless. POSTURE. Stooping, erect, spinal curvature. GAIT. Normal, lively, shuffling, unsteady, clumsy. GRIP. R L

MENTAL DEVELOPMENT

Recognition of Objects, Qualities and Words

MATCHING OF COLORS. Red, yellow, blue, green, white, black. COMPARISON OF SIZE. (Long, short, big, little, thin, thick.) RECOGNITION OF FORM. Ball, cube, disc. WEIGHTS.

NAMING OBJECTS. (Pencil, knife, book, key, handkerchief, envelope). RECOGNIZING COINS. (Cent, nickel, dime, quarter). NAMING COLORS. Red, yellow, green, blue, white, black. NAMING FORMS. Round, flat, square. WORDS. (Easy, medium, difficult).

Common Information

Age (says), birthday, father's name, address, brothers and sisters (their names, their number). Other intelligent information.

Word Tests

SPELLING. (cat, dog, man, see, can, book, foot, house, father, thing, summer, spring, garden, clock, inch, flowers, picture, America, Europe, enough).

MEMORY. Related words. Substantives for attributes. Words for opposites. Unrelated words

Pictures on card (time exposure, 30 seconds).

Number Tests

Correct	+ ;	+ ;	− ;	− ;	× ;	× ;	+ ;
Incorrect	+ ;	+ ;	− ;	− ;	× ;	× ;	+ ;

Change computed.

Comparisons and Differentiations:

INTERPRETING PICTURES—Easy (good, fair, poor); Medium (good, fair, poor); Difficult (good, fair, poor). Differentiate pictures of planes from pictures of solids by matching objects with these pictures.

Diagnosis

DEGREE OF MENTALITY. Dull, backward, backward-emotive, feeble-minded, imbecile, idiot.

PROBABLE CAUSE.

Recommendations

Medical

Social

Educational

Type of Class
- Foreign
- Over-age
- Backward
- Feeble-minded
- Disciplinary

PHILADELPHIA PUBLIC SCHOOLS
Backward Children Investigation

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Comparison of work in Regular School and Special School.

	REGULAR SCHOOL						SPECIAL SCHOOL NO 2. PHILADELPHIA													
	Birth	Age Entered	Grades Accomplished	Rate of Advance	Years in Regular School	Date of Transfer	Feb. 1905	Sept. 1905	Feb. 1906	Sept. 1906	Feb. 1907	Sept. 1907	Feb. 1908	Sept. 1908	Feb. 1909	Sept. 1909	Feb. 1910	Grades Accomplished	Rate of Advance	Years in Special School	*Classification	Probable Cause.
A———, P——	2/23/96	6	1	1/6	6	2/24/08	...	...	...	...	...	...	2A.	2B.	3A.	3B.	3B.	2	2/2.5	2½	Dull.	Physical defects—non-attendance.
B———, U——	5/ 2/96	6	1	1/7	7	9/20/09	...	...	...	...	...	...	...	...	2A.	2B.	3A.	1½	1.5/1.5	1½	Dull	Non-attendance due to frequent illness.
C———, R——	1/ 7/97	6	2½	2.5/6	6	6/ 1/09	...	...	...	...	...	...	...	...	.....	3B.	4A.	1	1/1	1	Backward	?
G——, W——	5/10/96	7	2	2/5.5	5½	11/16/08	...	...	...	...	...	...	...	...	3A.	3B.	3B.	1	1/1.5	1½	Backward	Speech defect.
H——, R——	1/92		No	School		12/ 7/08	...	...	...	...	...	...	...	...	4A.	4B.	5A.	1½	1.5/1.5	1½	Backward	Physical defects.—(Infantile paralysis.)
J———, H——	1/24/97	6	0	0	3	2/06	...	...	1A.	1A.	1A.	1B.	1B.	2A.	2A.	2B.	3A.	2½	2.5/4.5	4½	Backward	Physical defects.
K——, J——	12/18/98	6	½	.5/3	3½	3/ 5/08	...	...	...	...	...	...	1B.	2A.	2B&2A	3B.	4A.	3	3/2.5	2½	Backward	Malnutrition and environment.
K——, C——	11/ 1/96	6	0	0	3½	6/ 1/06	...	...	1A.	1A.	1B.	1B.	2A.	2A.	2B.	3A.	3B.	3	3/4.5	4½	Dull	Speech defect and environment.
L——, G——	9/ 8/96	6	½	.5/6	6	9/27/07	...	...	...	...	...	1B.	2A.	2B.	3A.	3B.	4A.	3	3/3	3	Backward	Speech defect
M——, J——	10/27/95	7	1	1/3	3	2/ 5/06	...	...	2A.	2A.	2A.	2B.	2B.	3A.	3A.	3B.	3B.	2	2/4.5	4½	Dull	?
M——, J——	2/19/97	6	0	0	3	2/ 5/06	...	...	1A.	1A.	1A.	1B.	1B.	2A.	2B.	3A.	3A.	3	3/4.5	4½	Backward	Physical defects. Speech defect.
N——, D——	11/ 9/97	6	2½	2.5/4.5	4½	9/14/08	...	...	...	...	...	...	...	3B.	3B.	4A.	4B.	1½	1.5/2	2	Backward	Non-attendance.
R—, H——	6/27/97	7	2½	2.5/5.5	5½	4/23/09	...	...	...	...	...	...	...	...	.....	3B.	4A.	1	1/1	1	Dull	Physical defects.
S———, G——	5/15/99	6	0	0	3	9/ 8/08	...	...	...	...	...	...	...	1A.	1B.	2A&2B	3A.	2½	2.5/2	2	Backward	Physical defects.
S——, F——	4/ 9/96	6	0	0	2½	12/15/04	1A.	1A.	1A.	1B.	1B.	2A.	2B.	3A.	3B.	4A.	4A.	3½	3.5/5.5	5½	Backward	Retarded development acct. of severe illness.
S———, A——	7/11/94	9	2	2/3.5	3½	5/ 2/07	...	...	...	...	...	3A.	3A.	3B.	3B.	4A.	4B.	2	2/3	3	Backward	Physical defects.—(Infantile paralysis.)
S———, C——	5/26/94	6	1	1/5.5	5½	3/27/06	...	...	2A.	2A.	2B.	2B.	3A.	3A.	3B.	3B.	3B.	2	2/4.5	4½	Dull	Immorality.
T———, H——	1/ 1/98	6	½	.5/3.5	3½	11/17/07	...	...	...	...	...	...	1B.	2A.	2B&2A	3B.	4A.	3	3/2.5	2½	Backward	Speech defect.
V——, J——	6/13/96	7	2	2/6	6	4/ 8/09	...	...	...	...	...	...	...	...	3A.	3A.	3B.	1	1/1.5	1½	Backward	Physical defects.

*Dull—Low mentality, but not necessarily feeble-minded.
Backward—Backward in school work due to physical defects, malnutrition, environment, etc.

JESSIE G. MYERS, *Teacher.*

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Appendix H

GODDARD'S RECORD BLANK FOR REVISED BINET TESTS

EXAMINED..... MENTAL AGE.....

NAME.....BORN.....ADMITTED.....

III

1 Points to nose, eyes, mouth.
2 Repeats "It rains. I am hungry."
3 Repeats 7, 2.
4 Sees in Picture 1. 5.
2. 6.
3. 7.
4. 8.
5 Knows name.

IV

1 Knows sex, boy or girl. (girl or boy.)
2 Recognizes key, knife, penny.
3 Repeats 7, 4, 8.
4 Conpares lines.

V

1 Compares 3 and 12 grams. 6 and 15 grams.
2 Copies square. (Draw on back of this sheet.)
3 Repeats, "His name is John. He is a very good boy."
4 Counts four pennies.
5 "Patience."

VI

1 Morning or afternoon. (afternoon or morning.)
2 Defines fork horse
table mama
chair
3 Puts key on chair; shuts door; brings box.
4 Shows R. Hand. L. Ear.
5 Chooses prettier? 1 & 2. 4 & 3. 5 & 6.

VII

1 Counts 13 pennies.
2 Describes Pictures. (See III 4.)
3 Sees picture lacks eyes, nose, mouth, arms.
4 Can copy diamond. (On back of this sheet.)
5 Recognizes red, blue, green, yellow. (Time 6".)

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VIII

1 Compares (Time 20″)

Butterfly	Wood	Paper
Fly	Glass	Cloth

2 Counts backward 20-1. (Time 20″.)
3 Repeats days. M. T. W. T. F. S. S. (Time 10″.)
4 Counts stamps. 111222. (Time 10″.)
5 Repeats 4, 7, 3, 9, 5.

IX

1 Makes change 20c—4c.
2 Definitions (See VI 2.)
3 Knows date.
4 Months. J. F. M. A. M. J. J. A. S. O. N. D. (Time 15″.)
5 Arranges weights. (2 correct; 1′ min. each.) 1. 2. 3.

X

1 Money 1c. 5c. 10c. 25c. 50c. $1. $2. $5. $10.
2 Draws design from memory. (show 10 seconds.)
3 Repeats 8, 5, 4, 7, 2, 6. 2, 7, 4, 6, 8, 1. 9, 4, 1, 7, 3, 8.
4 Comprehends.

(1st Series time 20″) (2 out of 3)	(2nd Series time 20″) (3 out of 5)
a. (Missed train)	a. (Late to school)
b. (Struck by playmate, etc.)	b. (Important affair)
c. (Broken something)	c. (Forgive easier)
	d. (Asked opinion)
	e. (Actions vs. words)

5 Sentence: Philadelphia, Money, River. (Time 1′)

XI

1 Sees absurdity. (3 out of 5) (Time 2′)

a. Unfortunate painter.	d. R. R. accident.
b. Three brothers.	e. Suicide.
c. Locked in room.	

2 Sentence: Philadelphia, Money, River. (See X 5.)
3 Gives sixty words in three minutes. (Record on back)
4 Rhymes (Time 1′ each) (3 Rhymes with each word)

day	mill
spring	

5 Puts dissected sentences together. (Time 1′ each)

a.	b.	c.

XII

1 Repeats 2, 9, 6, 4, 3, 7, 5. 9, 2, 8, 5, 1, 6, 4. 1, 3, 9, 5, 8, 4, 7.
2 Defines Charity
Justice
Goodness.
3 Repeats. "I saw in the street a pretty little dog. He had curly brown hair, short legs and a long tail."
4 Resists suggestion (Lines). 1. 2. 3. 4. 5. 6.
5 Problems: (a) Hanging from limb. (b) Neighbor's visitors.

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XV

1 Interprets picture.
2 Change clock hands. 6.20— 2.56—
3 Code. COME QUICKLY.
4 Opposites.

1	good	3	quick	5	big	7	white	9	happy
2	outside	4	tall	6	loud	8	light	10	false

ADULT

1 Cutting paper.
2 Reversed triangle.
3 Gives differences of abstract words.
4 Difference between president of a republic and a king.
5 Gives sense of a selection read.

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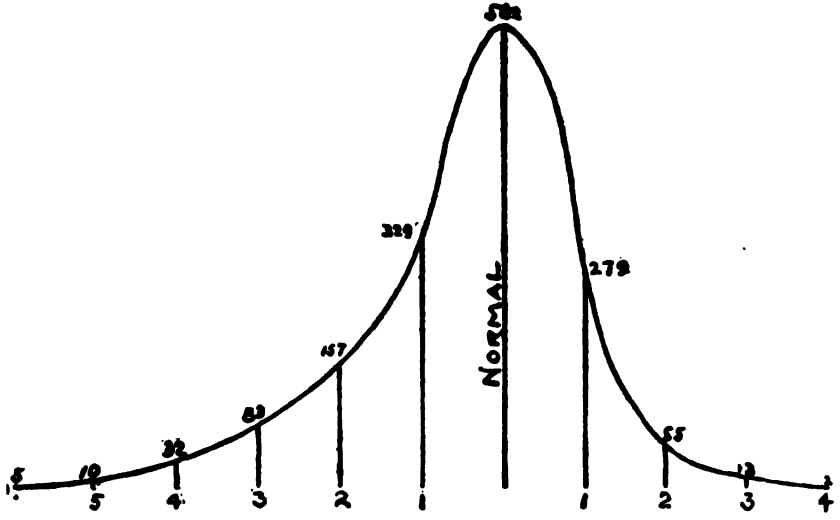
Appendix H, 1

Chart showing results of Binet Tests* with 1,547 children; the total population of a small city school system.



*Conducted under the direction of the New Jersey Training School and published here by courtesy of Superintendent Johnstone. The form taken by the curve of distribution is an indication of the value of the tests.

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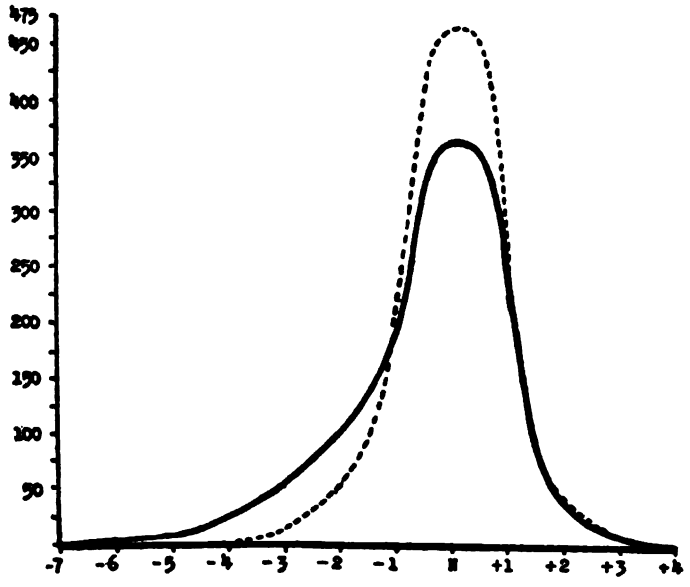
Appendix H, 2

Distribution curves showing variations from normal of 1,547 children tested by the Binet-Simon scale (solid line) and 14,762 children in 28 cities rated by their progress through seven grades (dotted line). Curves based on relative figures showing distribution of 1,000 cases of each kind.



From Dr. Leonard P. Ayres's "The Binet-Simon Measuring Scale for Intelligence Some Criticisms and Suggestions." Bulletin No. 107, Department of Child Hygiene, Russell Sage Foundation, New York.

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Appendix I.

FORMS USED IN SPECIAL SCHOOLS OF NEW YORK CITY

Form A

OBSERVATIONS ON CHILD

Proposed for an Ungraded Class

P. S.....Borough.....

Name.....Address.....

Age.....Grade.....Nationality F.....M.....

Yrs. in U. S.....Home Conditions.....

Health Record: Nutrition.....Bone Dis.....Enl. Gl.....

Teeth.....Throat.....Nose.....Vision R.....L.....

Hearing R.....L.....Nervous Disease.....

School Record: Kn'dg.....terms 1A.....terms 1B..... terms

2A.....terms 2B.....terms 3A.....terms 3B.....terms

Sp'c'l.....terms. School Att.....Cause of Irreg.....

Absence in last two terms.....Attention.....Memory.....

Oral Exp.....Hand Work.....Phys. Tr.....Number.....

Reading.....Writing.....Sp. Tastes.....

Disposition.....Behavior.....Habits.....

Peculiarities.....

.....

Other Information.....

.....19..... .....

Principal.

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Form F

NEW YORK CITY

SPECIAL MEDICAL EXAMINATION

P. S. ..... Borough .....

..... 19....

Name .....

1. General Condition .....

A. Anatomical .....

Cranium .....

Facial Asymmetry .....

Palate .....

Teeth .....

Tongue ..... Lips .....

Eyes .....

Ears .....

Limbs .....

Skin .....

Body in General .....

B. Physiological .....

1. Motor Function .....

Tics ..... Tremors .....

Epilepsy ..... Nystagmus .....

Promptness ..... Co-ordination .....

Prehension R. ..... L. ..... Gait .....

Speech ..... Fatigue .....

2. Sensory Function .....

Eyes R. ..... L. ..... Ears R. ..... L. .....

3. Condition of Heart ..... Pulse .....

C. Physical .....

Balance ..... Proportion ..... Moral Sense .....

Attention ..... Memory ..... Will .....

Peculiarities .....

D. Development—Att. Diseases .....

E. Family History: Births ..... Miscar. ..... Deaths .....

Cause of ..... Diseases F. ..... M. .....

.....

.....

Medical Examiner.

Recommendation .....

.....

.....

.....

Inspector Ungraded Classes.

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Form G

NEW YORK CITY

MEDICAL RE-EXAMINATION

P. S. .....Borough.....

.....191.....

Name.....

General Condition.....

Nutrition.....

1. Motor Function.....

Tics.....

Tremors.....

Epilepsy.....

Nystagmus.....

Promptness.....

Co-ordination.....

Prehension, R.....L.....

Gait.....

Speech.....

2. Sensory Function.....

Vision, R.....L.....

Hearing, R.....L.....

3. Condition of Heart.....

Pulse.....

Throat.....

Remarks.....

.....

.....

.....

.....

Medical Examiner.

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Form H

NEW YORK CITY
PEDAGOGICAL RECORD

P. S.....Borough.....

.....19.....19

Name.....

	Sept. 20	Dec. 20	Mar. 20	June 20	Sept. 20	Dec. 20	Mar. 20	June 20
Sense Training								
Taste								
Smell								
Touch								
Sight								
Hearing								
Physical Train. (imitation)								
" " (command)								
Writing								
Industrial Training								
Language (oral)								
" (written)								
Reading								
Arithmetic								
Nature Study								
Personal Habits								
Self Control								
Effort								
Gen'l Information								
Power of Attention								

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(Form H—Continued]

Power of Memory									
" Judgment									
Gen'l Health									
Fatigue									
Attendance									
									Teacher

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Appendix J

FORMS USED IN FRENCH SCHOOLS

AUXILIARY CLASS—MEDICAL CARD

.....Street
.....Name of Pupil.
.....Date and Place of Birth.

DATES OF EXAMINATIONS

Height.....
Weight.....
Vision.....
Hearing.....
Teeth.....
Sickness of different kinds and especially of the nervous system:
.....
.....
Observations on general condition.....
(Information by the teacher from observations of certain troubles which give cause for suspicion.)
Additional Remarks.

Date.....
(Yellow card) Doctor.....

AUXILIARY CLASS—CARD OF ADMISSION

.....Street
Name of Pupil.....
Date of Birth.....
Schools attended.....Grades.....
....
....
....
Number of absences.....
*Examination
1. Pedagogical
Reading Retarded.....years
Arithmetic Retarded.....years
Spelling Retarded.....years
Retardation in school work.....
2. Psychological
Failed on the tests of the.....year
Mental retardation.....
Date.....
.....
.....
(Red Card) *Examiners.*

*See chapter on Vaney-Binet Tests of Instruction.

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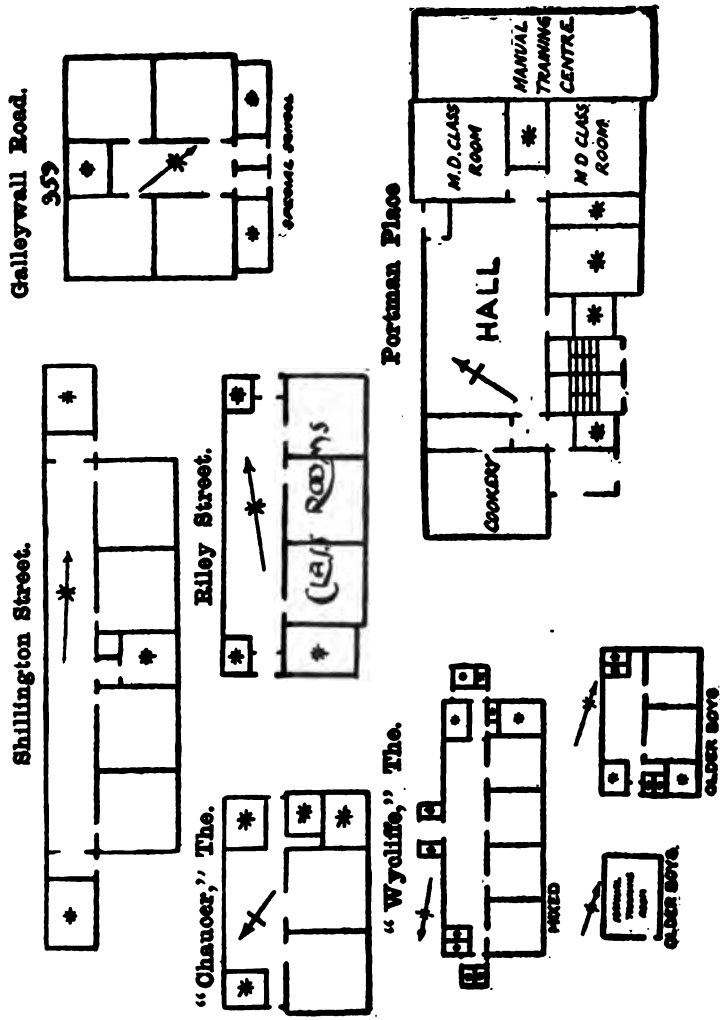
Appendix K

FLOOR PLANS OF SPECIAL OR AUXILIARY SCHOOL BUILDINGS IN LONDON, ENGLAND



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Appendix L

RECOMMENDATIONS OF NEW JERSEY COMMITTEE ON PROVISION FOR THE FEEBLE-MINDED AND EPILEPTIC*

(a) Medical inspection of school children is now required in every school district. (Chap. 92 of laws 1909.) The medical inspection should go farther than merely to detect contagion, sanitary conditions, etc. Eye, ear, nose, throat and teeth should be carefully examined and all remediable conditions corrected.

(b) The primary children of every school district should be examined by the Binet Measuring Scale of Intelligence or something equally effective, and as soon as possible a method should be adopted which shall be uniform throughout the State.

(c) In every school district in which there are ten or more children who are four or more years behind grade there should be established special classes. (This has been accomplished, Chapter 234, laws of 1911.)

(d) Backward and feeble-minded children should be placed in such special classes as long as it is safe to keep them in their homes, and the training should be largely industrial and manual. This will relieve the State and the community of a great deal of the expense of their maintenance.

(e) All feeble-minded children of every grade (including morons, imbeciles and idiots) who cannot properly be kept in their homes and sent to the special classes should be sent to the Training School at Vineland, where in so far as possible they should be trained for the lives they will live when they become men and women in years.

(f) All feeble-minded women of every grade (including morons, imbeciles and idiots) should be provided for at the State Institution for Feeble-Minded Women, where they shall find proper care and be given such profitable occupations as they are able to follow, such as small fruit and poultry raising, gardening and floriculture in summer, and needlework of various kinds, the weaving of stockings, underwear, carpets and rugs in winter; supplying not only their own needs, but also those of other wards of the State.

(g) All feeble-minded men of every grade (including morons, imbeciles and idiots) should be provided for at the State Village at Skillman, where they shall have proper care and be given such profitable occupations as they are able to follow, such as farming and even manufacturing on a small scale.

(h) All of the epileptics of every age and grade should be cared for at the State Village at Skillman, where there should be every facility for their scientific study, care, treatment and occupation.

(i) The scientific departments at the State Institution for Women and the Epileptic Village should have every encouragement, for the time for mere custody is past. This is the day of preventive measures, and nowhere is there such an opportunity to study means of prevention as in the institutions themselves.

*These recommendations embody the most progressive ideas along the line of provision for the feeble-minded and epileptic.

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